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# How to use reference books

Leon Orlando  
Wiswell

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# HOW TO USE REFERENCE BOOKS

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*Orlando*  
LEON O. WISWELL

SCHOOL LIBRARIES INSPECTOR  
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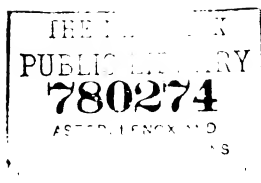
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HOW TO USE REFERENCE BOOKS

W. P. 1

WISWELL  
LEON O.  
HOW TO USE  
REFERENCE BOOKS

## PREFACE

SKILL in getting information from books is so necessary to a student that no school meets its full obligation if it does not early give systematic training in the use of a good library, and particularly in the art of consulting the more common works of reference. It has been too frequently assumed that little or no skill beyond the mere ability to read is required. This is a mistake. Centuries of time, in the aggregate, have been wasted by young students in awkward and only partially successful efforts to do it. The fact that these works are often of great size, are filled with technical devices, are complicated in some particulars, and so are really difficult for inexperienced persons to use, is too generally ignored, with the result that the books are voluntarily used far less than they should be, in school and out.

The aim in this book has been to offer practical assistance of an elementary character to the great body of teachers and parents who have had no special training for this duty. For this reason considerable attention has been devoted to the use of the dictionary, which is at once the most important reference work and the most common. It is suggested that some course of this general character be given to all prospective teachers.

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All minds in the world's history find their focus in a library. This is the pinnacle of the temple from which we may see all the kingdoms of the world and the glory of them. . . . Ages have wrought, generations grown, and all their blossoms are cast down here. It is the garden of immortal fruits, without dog or dragon.

— GILBERT DE LA PORRÉE.

## TRAINING TO USE THE LIBRARY

No student, however faithful and industrious, can hope to finish his education within the short period of his school course. He can only make a beginning. And if for superior attainments he is honored at the graduating exercises, still he is reminded by the name commonly applied to these exercises that he has reached only the Commencement of another period in the process of learning and doing, a period that is to continue as long as life shall last. If, early or late, he decides to rest on his past achievements, that moment he ceases to progress, and the busy, aggressive world moves on and leaves him behind. Another person, more efficient than himself, takes his place.

Manifestly, one of the greatest services any school can do for its pupils is to train them in ways and habits of being self-helpful, so that, when the separation comes, the individual shall go out strong in preparation for self-improvement.

That no other single agency is so potential a means of improvement as a collection of good books is

everywhere conceded. Every thoughtful teacher believes this; yet, while he is earnestly desirous to do his full duty toward the pupils under his charge, he is likely to find difficulty in accomplishing his purpose with the library. Lack of time, lack of books, lack of interest on the part of the pupils, lack of preparation on the part of the teacher, all combine to prevent it from being as useful or as helpful as it might be. The teacher often finds it easier to tell than to teach, easier to do a task for a pupil than to train him to do it for himself, easier to meet the immediate demands of the day than to look far ahead and make plans for a lifetime. No wonder there are failures.

The ideal teacher, often approximated in real life, finds time, gets books, supplies deficiencies, overcomes difficulties, and somehow sees that his pupils obtain the essentials of the best training that the wisdom of the time can suggest. No one is more prompt than he to welcome and appreciate offerings out of the experience and study of another.

The mere possession of books counts for nothing. In them may be recorded the wisest thoughts and the most noteworthy accomplishments of men, but unless they are read they are valueless. The student, if he knows how, may quickly turn to them for fact, suggestion or inspiration; and if his private

collection is not sufficient, there are public libraries which he may draw upon if he chooses.

Every school library and every other public library should be regarded as an educational means of the greatest importance; therefore, the training of pupils to use such a library properly and profitably should be a leading function of the school. The ability to find answers to the myriads of queries that arise in every observing and thoughtful mind is not acquired by inheritance or by purchase, but by study and practice.

Formal and systematic instruction in the use of libraries is logically a part of the course in English, and periods for it may very properly be taken from those assigned to that subject. If the authorities approve, students may earn credit in this division of the English course as legitimately as in any other.

The first reading by the child is chiefly to learn the mechanical process of interpreting the printed page. As soon as this has been fairly well accomplished, say at the end of the third or fourth year, he is prepared to read in order to acquire new ideas. Then, if not before, he begins to find in books mention of things of which he has little or no knowledge. If he is permitted to ignore them, he is receiving lessons in mental vacuity, in carelessness, in inefficiency, in self-conceit, in bluff. If the teacher



simply gives the pupil explanations which the latter could find, and ought to find, for himself ; then the pupil is receiving lessons in dependence on the teacher, with whom he will be associated but a few months at most ; he is learning to expect from others service which he ought to perform for himself, and he is being deprived of the joy of doing and of making discoveries independently. The ability and the promptness of the pupils to help themselves not only relieve the teacher of much labor ; they are evidence of his success.

It would be impossible to overestimate the value of the good books, other than reference works, with which the world has been blessed. To learn to read them habitually and with appreciation is a most important part of a good education. The reading of weak and senseless books is debilitating. A person will receive most benefit, and, incidentally, most pleasure and satisfaction, from books that are advanced enough beyond his knowledge or experience to try his judgment and understanding somewhat. It is true that without understanding there is no interest, and without interest there is little or no profit ; but the effort to learn will result in intellectual progress. The usefulness of reference works upon which the student can draw for information is apparent.

Two helpful books on this subject for teachers and students to read are, Hinsdale, *The Art of Study*; and McMurry, *How to Study and Teaching How to Study*.

### WHAT ARE REFERENCE BOOKS?

Most books treat of related topics in logical or progressive order, or describe a course of real or imagined events, and are intended for continuous reading. But there are some made up of bits of unrelated or loosely related information, which are intended for the enlightenment of the student, subject by subject, as he may choose to consult them. In the course of his reading, his studies, his travels, or his social intercourse, every intelligent person is frequently confronted by the discovery that he lacks understanding of some term, or knowledge of some particular subject. If he is earnest and conscientious, the impression made upon him by such a discovery is that of an unbridged chasm which effectually blocks his advance, or perhaps that of a great blot on the page, which obliterates an important word or passage and makes the meaning of other passages obscure. A book which contains the desired information in concise form is to him a means of bridging the chasm or restoring the passage. To it he refers as he has need; hence it is a reference book.

Among the works which are designed solely for reference are dictionaries, cyclopedias, gazetteers, concordances, atlases, directories, time-tables, and others. The contents of each are so arranged or indexed that any particular item may be found with the least possible difficulty.

Those works which treat of no particular subject are general; of this class the common English dictionaries and the common cyclopedias are examples. Those which relate to a particular subject are special or technical; in this class would fall a dictionary of music or a cyclopedia of agriculture, for example.

Of the books which are primarily intended for continuous reading or progressive study, some are admirably adapted to serve for reference. This is especially true of some advanced textbooks, of many treatises, and of all voluminous works. Their value for this purpose is greatly enhanced by the inclusion of full indexes. Whether such books shall be regarded as reference works depends on the use that is made of them.

After the devices or arrangements for quick finding have been mastered, there still remain the broader tasks of directing one's reading or study in profitable ways, and of deciding what books give greatest promise of furnishing satisfactory answers to inquiries.

Teachers and others who are charged with the duty of selecting reference works for purchase, or of recommending any to students for use, might welcome the suggestions given or referred to in the paragraphs on "The Physical Forms of Books" and "Accessions." If choice must be made between books for reading and books for reference, the former should be taken. But a few books of reference are positively indispensable; the number may be increased as the need for them develops, and as the means to buy them become available.

Reference books should be kept in a collection by themselves where they are perfectly accessible to students and teachers at all times. If the students make little or no use of them, the alert principal will observe that fact and will investigate the reasons for such neglect.

Every school ought to be prompt to make profitable use of any public library that may be in the vicinity. Some reference books, especially very expensive or pretentious works, belong particularly in the public library. It is better to consult them there than to use an undue amount from limited funds to buy them for the school library.

It is always to be remembered that, when rightly taught, the pupils find increasing pleasure and satisfaction in reading and in consulting references.

Only in this way can literary taste be improved and the reading habit be formed. If the work is distasteful and continues so, it is a failure.

### SPECIAL AIDS IN FINDING REFERENCES

The course of the student in consulting any one book is repeated substantially with every other. He looks to the table of contents for an idea of the plan and scope of the book, and to the index for the location of matter on particular topics. He perhaps reads the preface, which is usually not without value. It is the author's personal word to the reader, in which he perhaps states the purpose he had in writing the book, the theory on which it was based, the conditions which he tried to meet, and similar matters that, if known to the reader at the outset, would insure a more intelligent, and, possibly, a more respectful review.

To learn to do tasks in the simplest and easiest manner should be a part of every pupil's education. Life is too short and time is too precious to allow any one to do otherwise. These aids are among the numberless means of saving time and so, in a sense, of lengthening life.

It will be observed that the basis of the device or arrangement for the quick finding of any particular passage is almost invariably the alphabet, or the

Arabic numerals, or a combination of both. The Roman numerals are sometimes used to advantage. The study of a very few typical works, therefore, gives one a key to the devices adopted in all the others. Two of the most useful devices, the table of contents and the index, are here described.

#### THE TABLE OF CONTENTS

A table of contents is a synopsis or summary of the topics treated in a book or magazine. Its usual place is at the beginning of the volume. Most commonly it contains merely the chapter headings; sometimes, however, it contains the main topics and the divisions and subdivisions thereof, all in orderly course, and in a form to indicate their mutual relations. The page on which each begins is given. Such a table enables one in a moment to get a fair general idea of what the volume contains, and this in turn helps him to determine without loss of time whether the book as a whole, or any part of it, is likely to be of value or interest to him. It is only the novice, therefore, who laboriously turns the leaves of an unfamiliar book and glances at a page here and there, overlooking the table of contents, when his object is to obtain a general idea of its character and the topics treated, or to learn whether it includes matter on a particular topic.

Examples: Observe the construction of the Table of Contents in the following books: Brewer, *Rural Hygiene*; Griffis, *The Romance of American Colonization*; Hamerton, *The Intellectual Life*; Hudson, *An Introduction to the Study of Literature*; Parkman, *Pioneers of France in the New World*.

### THE INDEX

Complementary to the table of contents is the index. This is an alphabetic arrangement of topics which indicates the page or pages on which each is treated. Its usual place is at the end of the book. Not every book is of a character or size to demand either a table of contents or an index, but most works of reference would be very incomplete without both. The alphabetic arrangement of the dictionary and the cyclopedia makes the index unnecessary in those works, but ordinarily it is of special value. One has only to think of the most significant word in a topic to be studied, and turn to that word in the index, where he may learn exactly where to find the given passage, if the book includes it.

The index is of value also in showing whether the book does or does not contain something in relation to some given topic. The table of contents is useful for the same purpose, of course; but it is compara-

tively broad or general in its terms and its order is logical, while the index is usually very specific and its order is alphabetic.

In a work consisting of two or more volumes, each volume may have an index, or there may be one general index at the end of the last volume for the entire series. Where the latter is the case, both the volume in which an article begins and the page on which it begins must be indicated. The volumes are usually indicated by Roman letters and the pages by Arabic figures, as v. 256; that is, volume 5, page 256. Both the comma and the dash are sometimes used, as pp. 84, 92-96, 105. This means that passages on the given topic may be found on page 84, on all the pages from 92 to 96, and on page 105.

Illustrative index entries selected from Macaulay's *History of England*:

Monk, George. See *Albemarle*.

Marlborough, John Churchill, Duke of; his rise and character, i. 416. His letters to William III, ii. 238, 398. Complaints of his avarice, iii. 394. His expedition to Ireland, iv. 68. William III's reconciliation with, v. 351.

Roads, badness of, time of Charles II. i. 339, 344.

Examples: Observe the construction of the index in the following books: Comstock, *Handbook of Nature-*



*Study*; Hudson, *An Introduction to the Study of Literature*; Parkman, *Pioneers of France in the New World*; Roark, *Method in Education*; Thorpe, *A Short Constitutional History of the United States*; Hoyt, *Cyclopedia of Practical Quotations*. (Observe Topical Index in fore part of last named book, and Concordance in back part.)

### TAKING NOTES

Taking notes of information or suggestions obtained from the library, from lectures, or elsewhere, is an art that the student finds desirable to cultivate. Teachers may profitably spend a little time in giving advice on this subject to those under their charge. In the first place, notes are useful only as an aid to the memory; and the poorer the memory, the fuller should be the notes.

If at all extended, the treatment of most subjects, perhaps all, may logically be divided into parts by topics, some major and some minor, and all related to each other in some degree. It should be the aim of the student to recognize each topic as he reads and to formulate a brief title for it, perhaps using for this purpose a phrase from the text. The written titles in their consecutive order, interspersed with condensed sentences or direct quotations, constitute "notes." Properly prepared, these present

the skeleton of the book or discourse, later, perhaps, to be rounded into a full and complete composition. Skill in analyzing the text, in formulating topics, and in selecting striking phrases, is gained by practice.

It is advised that, wherever practicable, the relations of the topics be indicated to the eye by arranging the notes on the page so that the left margins shall be at varying distances from the edge of the sheet, the minor items a little farther to the right than the major items above. Letters and figures may be used for the same purpose. All non-essential words should be omitted, and some others may be abbreviated. A little knowledge of stenography is often helpful. Uniformity in the size of sheets used is a convenience in filing and preserving them.

There is a kind of note making required in some schools which is intended for a quite different purpose. It furnishes with literary completeness a formal record of individual research, experimentation and illustration. Formulating such a record leads to a clearer understanding of the subject, writing it out fixes it more securely in memory. And the notebook is material evidence of the extent and character of the work done.

Notes which have been carefully collected and arranged may be indexed, and in themselves may

become a valuable work of reference. Whole courses of study have been compiled in this way by students who intend later to teach a special subject.

Suppose a student wishes to use a course in history as a permanent reference work. He takes notes daily in class. They may contain abstracts of discussions raised by the questions of other students, or additional material contributed by the teacher as an expansion of that supplied by the textbook. Notes on references done as exercises outside of class work, besides providing for the teacher a record of assigned work done, constitute the selected or important phases in the course. An illustrated lecture may be part of the work, and an abstract of this may be added, or an account of a visit to a museum or some place of historic interest connected with the study.

At the end of the term, the notes are collected and bound together. The whole course, class notes, lecture notes, and reference notes, is available for use as a basis of a new course, as reference, or simply as evidence of a piece of work well done.

## **INDISPENSABLE REFERENCE BOOKS**

Let the accent of words be watched ; and closely ; but let their meaning be watched more closely still, and fewer will do the work. A few words well chosen and distinguished, will do work that a thousand cannot, when every one is acting, equivocally, in the function of another.

—JOHN RUSKIN.

## THE DICTIONARY

By far the most important single general reference work is the English dictionary. It is the first which children use, and the more they increase in knowledge and understanding the more they get out of it. It is the student's constant companion while he is reading. It is a storehouse of precious information on an infinite number of subjects to which observing and studious men have been contributing for generations. It contains something for young and old, simple and wise, casual reader and specialist. Few even among well-informed people are fully aware of the variety and extent of the matter contained within a large modern dictionary.

### HOW TO ENCOURAGE THE USE OF THE DICTIONARY

1. The dictionary should be easily accessible ; if it is not, the voluntary use of it will be greatly diminished. If it is kept in another room or on a high shelf, it may almost as well be hidden. Every conscientious student will feel better satisfied with the results, if, when he sits down to read, he has the dictionary within easy reach so that he can consult

it with little effort. An almost ideal plan is for each pupil in the elementary grades to have in his personal outfit a dictionary of medium size, and when this smaller book proves inadequate, to have convenient access to a larger one provided by the school board. Advanced students will usually find the smaller dictionaries more or less unsatisfactory, and should early form the habit of consulting the larger in the first instance. A small reference book is more gratifying to lazy or tired muscles, but a comprehensive work is more satisfying to alert, inquiring minds.

2. The dictionary should be clean. A dirty book is repulsive. A reference book should attract.

3. The dictionary should be kept on a table large enough to hold both it and any other books or notes which the student may have occasion to use. A chair or chairs should be provided so that the student may suffer no discomfort, and regard should be had for the strength and direction of the light. To oblige an inquiring pupil to lift a heavy volume, to carry it some distance, and then to hold it on his lap while consulting it, is to discourage its use and to jeopardize its safety.

4. The use of the dictionary should be taught directly, positively and systematically. It is not enough for a teacher to say, "There it is; use it if

you will," and to do little or nothing more. Systematic instruction should begin at about the fourth or fifth grade with simple exercises in finding words and learning their definitions. As the student advances from grade to grade, this instruction should be continued and broadened in scope until, when he reaches the last year of his high school course, he has the ability to consult it intelligently and quickly. Intelligence to perceive and apply comes first, then facility in handling and in finding. The former is increased by instruction, the latter by practice.

5. Whether large or small, the dictionary should be the best of its kind, and of the most recent edition. It is the content rather than the binding that should receive first consideration; yet the binding should be strong and durable. One of the tributes to real worth is the appearance of imitations, and the best English dictionaries are thus honored with rivals which, though widely and artfully advertised, the discerning will leave for the uncritical to buy.

6. The habit of using the dictionary should be encouraged and cultivated. Most people seem quite unaware of the extent to which, from morning till night, in small things and in great, their lives are ordered by habit. "Habit implies a settled disposition or tendency leading one to do easily, naturally, and with growing skill or certainty what



one does often." It is formed by simple repetition, and, when rightly regulated, it relieves the mind of indecision and holds one steadily to a desirable course. The frequent use of the dictionary is largely a matter of habit; but, if its use be imposed as a task instead of being set forth as an agreeable duty, repetition may only intensify the dislike with which it was begun.

7. The impulse to use the dictionary should come from within. Does the student act on his own initiative? Does he gauge his own understanding and set himself to intensive study if there is need? Or does he expect somebody else to tell him what to look for, and when and where to look? Is he independent or dependent? When he passes from the control of the master, does he conscientiously continue his studious habits as occasion warrants, thereby both performing a duty and adding to his intellectual pleasure, or does he gladly discard the dictionary forever? The success of his training must ultimately be judged by this standard.

8. Every individual should have a good dictionary of his own. Aside from the convenience of it, a special interest in it will arise from the sense of ownership. This is one reference book which is absolutely indispensable at all times, and with a few standard books for reading, it should form the

nucleus of a collection that may finally grow into a fine library.

### FINDING WORDS

In using a dictionary, particular words must first be found, and without waste of time. If a pupil spends five minutes in finding a word which he ought to be able to turn to in ten seconds, it is obvious that he is wasting time and energy. For convenience, the alphabetic order is used ; and the ability of the pupils to name the letters rapidly in order should be tested. Expertness in finding words can be acquired only by practice. For the user's assistance there are two devices, the thumb index and the top guide words. The thumb index is an arrangement by which the exact page on which each initial series begins is shown by the letters of the alphabet arranged in two diagonal rows down the front edge of the book. By pressing the thumb on the proper letter and opening the book at that place, the user at once finds the beginning of the particular initial series which includes the word sought. This saves time and saves the book. The letter at the bottom of the first row and the one at the top of the second should be observed and remembered.

The next step in the search for a word is to observe the two words plainly printed at the top of each

page, one on the left, the other on the right. They show respectively the first and the last words treated on the page and so serve as guides to the words listed on it. From these it is easy to determine whether the given word is to be found on the page.

## SPELLING

### *Capitals; Hyphens*

Usage varies as to the spelling of certain words. Proper names and adjectives derived from them, as a rule, begin with capitals; but in applying the rule there is often uncertainty. When in doubt, consult the dictionary. When two or more forms of approved spelling are given, the one that is considered preferable is placed first. The dictionary indicates the correct forms of irregular plurals of nouns and of past participles of verbs.

The student who has access to the *New International Dictionary* will be interested in the special chapter on orthography, which includes a historical sketch, "Observations", and "Rules for spelling certain classes of words."

Present usage sanctions fewer hyphenated words than former usage did. The tendency is to combine the parts of compound words into solid, unhyphenated words or to write the parts as separate

words. In consulting the *New International Dictionary* for the correct use of hyphens, observe that both heavy and light hyphens are given. The light hyphens are used merely to separate such syllables of any word as are not separated by accent marks. The only hyphens actually to be used in writing a word are those printed in heavy type.

Words for observation or practice :

bedtick	wall paper	water-logged
birdseed	war horse	mock-heroic
bloodhound	water mill	middle-aged
bookstore	pig iron	jack-in-the-pulpit
earring	mince pie	brother-in-law
shopkeeper	cabbage head	to-day
silversmith	bay window	broken-down
bobwhite	market place	post-office
fishhook	sea rover	boot-tree
baseball	basket ball	ten-strike
waterfowl	water cress	bull's-eye
millstone	mill pond	make-believe
battlefield	cave men	battle-ax

### PRONUNCIATION

If a person is to consult the dictionary intelligently regarding the pronunciation of words, he must have accurate knowledge of the elemental

sounds of which they are composed, and of the printed symbol by which each is represented. He must also know the correct division of words into syllables, and the correct position of the accent.

### *Division into Syllables*

As perceived by the ear, a word is an impulse of the voice or a succession of such impulses, the basis of which is an open sonorous sound proceeding from the vocal cords (vocal lips) located in the larynx. These sounds are called vowel sounds or, simply, vowels. As the letters which represent them are also called vowels, the student should be careful to distinguish between these two uses of the word. The vowel sounds may be, and generally are, immediately preceded or followed, or both preceded and followed, by sounds that are formed with some degree of obstruction by the lips, the tongue or other vocal organs. These are known as consonant sounds or consonants.

As with the word vowel, so with the word consonant; it is used to denote both a certain kind of voice sound and the letter which represents it. A consonant sound is hardly ever given separately, but is practically always uttered in connection with a vowel sound; hence the name (*con*, means with; *sonant* means sounding).

A vowel sound or a combination of vowel and consonant sounds uttered with one effort or impulse of the voice in the pronunciation of a word is called a syllable. Almost every syllable has a vowel sound, but some vowel letters, like final silent *e* as in *ride*, are not used as the bases of separate syllables. Listen to the pronunciation of illustrative words, as *copper*, *contradict*, *perpendicular*, and note the successive impulses of the voice, each of which has one open, sonorous sound (vowel), and some of which are also strongly marked by obstructions in the vocal passage (consonants).

The division of a word into syllables is easily perceptible to the ear and is usually learned with little effort by imitation. Ordinarily there is little occasion to divide the written or printed word at all; but a difficulty with syllables arises when the writer or the printer finds it desirable to divide a word at the end of a line, and particularly when, as in reading aloud, the student wishes to learn how to pronounce an unfamiliar word. The best and most convenient help is the dictionary; and to consult it for this purpose intelligently one must know something about the elemental sounds of the language, of which the letters are mere signs.

Of course the untrained person guesses at the correct pronunciation of every unfamiliar word he

happens to see; and as there are usually several incorrect ways of pronouncing it, while there is only one correct way, the chances are against him. Not understanding this, or not caring, he ventures unhesitatingly, with the almost inevitable result of exposing his lack of training to every listener.

For further study, see "A Guide to Pronunciation," in the *New International Dictionary*, p. xxxviii, and "Rules for the Syllabic Division of Words in Writing or Print," p. lix.

### *Accent*

Accent is the prominence given to one syllable of a word over the adjacent syllables. This prominence is manifested by stress, or force of voice, which increases the relative loudness, by higher pitch, by increase of duration, or by a combination of two or more of these elements. Every word of more than one syllable contains at least one accented syllable. Various degrees of accent may be distinguished in polysyllables (*poly* means *many*), but in practice all are classed as either primary (marked ') or secondary (marked ' or "). The accent marks immediately follow the syllables to which they relate. Every spoken word of more than one syllable has at least one syllable with a primary, or heavy, accent. In many words of three syllables and in

most words of more than three syllables both primary and secondary accents occur.

*Diacritical Marks or Special Phonic Signs*

In an ideal alphabet, *i.e.* one that is purely phonic, there would be exactly as many letters as there are elemental sounds in the language, and each of such sounds would be represented by a particular letter. The English alphabet consists of 26 letters; and as these are used to represent more than 40 elemental sounds, it follows that some letters must each represent more than one sound. *A*, for example, does duty for several sounds. To make our system more confusing, two letters are sometimes used to represent one sound, as *ch* in *chin*; one letter sometimes represents two sounds, as *x* in *box*; a letter, or even a combination of two letters, is sometimes used in a word without representing any sound whatever, as *ue* in *tongue*; and a letter is sometimes used to represent a sound that ordinarily is associated with another letter, as *i* for *e* in *caprice*. As neither *c*, *q* nor *x* represents any distinctive sound, these three letters could be dropped without serious loss were it not for established custom.

The condition just described makes necessary the use of a system of diacritical marks or special phonic signs (*phon* means sound) by which to indicate the



particular sound or sounds for which certain letters stand. At present there are numerous systems in use. The best known is the one used in Webster's *New International Dictionary*; the important marks of that system have been familiar to all educated Americans for three generations and have been incorporated in reference books of many kinds. Obviously, the student should learn the system or systems used in the books which he consults, if he is to understand any printed references to the pronunciation of words. It is desirable to choose one for illustrative purposes here, and that which is followed in the *New International Dictionary* is accordingly taken. It is hoped that every reader who happens to use a different system will recognize the common phonic basis of all systems, and that he will be helped by this study to a clearer understanding of his own system. Though a phonetic chart (guide or key to pronunciation) ought to be at hand for reference in this study, an expensive printed one is not necessary as each student can easily copy for himself the one given in the fore part of his dictionary, or a large one can be written for the class. The publishers will send one on request. As the system of the *New Standard Dictionary* (see page xxxviii) consists partly of modifications in letter forms instead of diacritical marks, it cannot be readily transcribed

with pen or crayon. It is not advisable to make an exhaustive study of each element as it appears in the chart; better results will be obtained if a practical knowledge of all the elements is secured by drilling on a sufficient number of miscellaneous words.

The fundamental thing is the elemental sound. It will be the student's aim to produce each correctly, to distinguish it readily and to make the corresponding character or phonetic sign which shall exactly represent it to the eye. It is only by association in this way that, when later the process comes to be reversed, the printed form as given in the dictionary promptly suggests the correct oral form. This study has the further advantages of inducing distinct utterance and preserving the purity of the language. It is of course well to begin with the simplest elements.

### *Names of Most Common Diacritical Marks*

(For complete list see tables in "Guide to Pronunciation" in dictionary)

dot	.	circumflex	^
macron	—	modified macron	±
breve	˘	cedilla	¸
two dots	..	tilde	~

### *Long Vowel Sounds*

The vowel letters are *a*, *e*, *i*, *o*, and *u*. All the other letters are consonants, except that *w* and *y* are vowels when they stand for one of the five just mentioned. For the distinction between vowel sounds and consonant sounds, see the paragraphs on "Division into Syllables," page 32.

In the word *ate*, the name of the first letter, *a*, and the sound for which it stands are the same. This is therefore called the name sound, or, more commonly, the long sound, though it is really no longer than some other sounds of the same letter. It is indicated by a macron over the letter, as *ā*. The other vowel letters represent name sounds or so-called long sounds also, and when they do so they should be marked similarly, as *ē*, *ī*, *ō*, *ū*. They occur, for example, in the words *mete*, *mite*, *mote* and *mute*. In each, the name of the second letter and the sound for which it stands are the same. The name sound of *u* is a little more clearly observed in *use*, in which an initial *y* or *ī* sound may be detected. With the consonants it is different; the name is one thing, the sound it stands for is quite another. Take, for example, the word *make*; the name of the first letter is *em*, but the sound it stands for is that part of the word which occurs before

the vowel sound and which is produced by closing the lips and directing the sound through the nose.

Each vowel letter may stand for different sounds in different words, and therefore it needs distinguishing marks, while with few exceptions each consonant letter stands for one sound only, and therefore needs no diacritical mark.

Following are a few miscellaneous words for study and practice. Others may be added. Pronounce each distinctly, giving attention with the ear rather than with the eye; then word by word produce each elemental sound in succession and indicate it by the correct letter, adding diacritical marks as needed. Silent letters, *i.e.* those which represent no sound, may be canceled.

FULL FORM	PHONETIC FORM
make (1)	māk
beat (2)	bēt
hide (3)	hīd
folks (4)	fōks
lure (5)	lūr

(1) Observe that the *k* sound in *make* is not *kay* nor *kuh*, but is simply a slight outburst or explosion of breath following the closure of the vocal passage toward the back of the mouth. When produced correctly it is voiceless, while the sounds of *m* and

*a* are voiced. To detect the difference, place the fingers on the throat at each side of the "Adam's apple" and observe that it vibrates or jars only when the voiced sounds are produced. The final *e* is silent. The printed word contains four letters, but the spoken word contains only three elemental sounds.

(2) The first sound in *beat* is not *be* nor *buh*. It is a voiced sound made with the lips closed and is somewhat difficult to produce alone. The *a* is silent. The final sound is not *te* nor *tuh*, but is a slight outburst of breath following the closure of the vocal passage by the tip of the tongue. Other voiceless consonants are *f*, *h*, *k*, *p*, and *s*.

(3) The first sound in *hide* is a mere breathing or pure aspirate. Listen carefully to the last sound as the whole word is spoken. It is not *duh*.

(4) In *folks*, the *l* is silent and the only voiced sound is that of *o*.

(5) Listen carefully to the last sound as the word *lure* is pronounced. Note that the word has only one syllable; it is not *lū'er*.

### *Short Vowel Sounds*

Another series of vowel sounds, the so-called short sounds, is illustrated in the words *bag*, *beg*, *big*, *bog* and *bug*. Each is indicated by a breve over the corresponding vowel, as *ă*, *ĕ*, *ĭ*, *ô*, *ŭ*.

Illustrative words and the corresponding phonetic forms :

ham	hām	box (4)	bōks
get (1)	ġēt	exist (5)	ĕg-zĭst'
jump	jŭmp	cape (6)	kāp
bridge (1)	brĭj	race (6)	rās
lint	lĭnt	toque (7)	tōk
ring (2)	rĭng	we (8)	wē
ink (2)	inĭk	quest (9)	kwĕst
vest (3)	vĕst	yet (10)	yĕt
zone	zōn	by (11)	bī
nose (3)	nōz	hymn (12)	hĭm

(1) It will be observed that in *get* and *bridge* the *g* has different sounds, the "hard" and the "soft," the latter of which is the *j* sound. Persons who desire to indicate the pronunciation without respelling may mark the words ġēt and brĭġġ. See tables of phonetic symbols in "Guide to Pronunciation," page xxxvii. The silent letters are canceled.

(2) Listen carefully to the first sound in *ring*; it is not *ur*. Observe that in *ng* we have two letters representing a single sound. The test of this is that it can be indefinitely prolonged without losing its identity. Observe also that in *ink* the *n* alone stands for the same sound. Note the distinguishing mark in the latter case.

(3) Compare the sounds of *s* in *vest* and *nose*. In the former it is a hissing, voiceless sound; in the latter it is a voiced sound, that of *z*. *Nose* may be marked *noʒ*. See note 1. The substitution of the sound of one letter for that of another, as in this case, is common.

(4) In *box* is a letter (*x*) which stands for a combination of two separate sounds, *ks*. Though the printed word has only three letters the spoken word has four elemental sounds.

(5) Observe that in *exist* the *x* also stands for a combination of two sounds, *gz*, but they are quite different from those in *box*. In *box*, both are voiceless; in *exist*, both are voiced. The vocal positions for both pairs are the same. The voiced sound of *x* is sometimes marked *ḡ*. See note 1.

(6) In *cape* and *race*, observe the two sounds of *c*, both of which are regularly represented by other letters. Without respelling, they may be marked *ēāp* and *rāc*.

(7) Observe that *q* stands for the *k* sound. This it always does. The last two letters are silent. The word may be marked *tōq*.

(8) The *w* in *we* would here be classed as a consonant or as a semivowel. It is much like *oo* in *fōod* or *oo* in *wōod*, but is very brief, as the learner will perceive by listening to the distinct and natural pro-

nunciation of the word *we*, and comparing the sounds of the two letters. The *w* sound is closely joined to that of *e* and is difficult to utter alone.

(9) Though it is commonly understood that *u* is a vowel, note that in *quest* it represents the sound of *w* and is therefore a consonant or a semivowel.

(10) Like *w*, *y* as in *yet* is a consonant or a semivowel. In this instance its main sound is much like *ē* in *ēve*. It is closely joined to that of the vowel following it, and is difficult to utter alone. This is the usual sound of the letter when it is used at the beginning of a syllable.

(11) In *by*, the *y* is clearly a vowel and has the sound of *ī*. Whenever *w* or *y* is used as a vowel, it has the sound of some other vowel, as *ōō*, *ī*, *ī*. This word may be marked *bȳ*.

(12) Here again, in *hymn*, *y* is a vowel, and stands for the sound of *ī*. The word may be marked *hȳm̃*.

### *Words for Practice*

seem	blow	dust	fire
run	hit	rod	tram
stone	hale	slack	grand
fret	true	gill	drink
trinket	scheme	cart	lax
fling	rose	examine	play
acknowledge	wrapped	snug	vanity



*Other Sounds of a*

Illustrative words and their phonetic forms :

fare (1)	fâr	any (6)	ěn'ŷ
ark (2)	ärk	senate (7)	sěn'ăt
task (3)	tâsk	arise (7)	ă-rîz'
small (4)	smôl	accuse (7)	ă-kûz'
was (5)	wôz	cellar (7)	sěl'ěr

(1) The *a* in *fare* is neither long ( $\bar{a}$ ) nor short ( $\check{a}$ ), neither is it quite equivalent to a prolongation of short *e* ( $\check{e}$ ). It cannot be easily described, and if the student is not sure how to pronounce it he should ask some one who knows.

(2) The sound of *a* in *ark* is a perfect vowel in that it is produced with the vocal passage well open and with the organs in very easy and natural positions. It is the most musical vowel sound in the language. It predominates in several other languages, and, indeed, is often called Italian *a*, but it is not a very common sound in English.

(3) The *a* in *task* is neither Italian *a* ( $\check{a}$ ) nor short *a* ( $\check{a}$ ), but is a compromise between them. Like the *a* in *fare*, it is often incorrectly pronounced. Any pupil who fails with these should listen intently to the cultured manner of pronouncing them and try to imitate it without affectation. The power to

hear correctly must be cultivated as well as the power to reproduce correctly. The following stanza from an old song furnishes material for practice :

There was a king of France, sir,  
Who only knew how to dance, sir;  
And that gave little chance, sir,  
To drive dull care away.

Both *tăsk* and *täsk* are to be avoided.

(4) The sound of *a* in *small* is like that of *o* in *ôrb*, so that here, as in many other cases, we have two letters representing the same sound. Without respelling, the word may be marked *smäl̥*. See note 1, page 41.

(5) The sound of *a* in *was* is like that of *o* in *hôt*, and is different from the sound described in note 4. The word may be marked *waş*.

(6) In *any*, the *a* stands for no distinctive *a* sound, but for that of short *e* (*ě*).

(7) There is a general inclination to utter the vowel sounds, particularly those in unaccented syllables, with as little effort as possible. This has resulted in establishing as reputable certain shortened or obscure sounds, which the novice, in his very effort to be accurate, is liable to miss. In the study of them it is best to pronounce, as in conversation, the entire words in which they occur. The pronun-

ciation of separate unaccented syllables for this purpose may lead to mispronunciation. Four such sounds of *a* are here illustrated :

In *senate*, the *a* is not exactly long, as it lacks the final long *e* (*ē*) sound with which long *a* ends when it is uttered deliberately. (See paragraph on diphthongs, page 52.) The sound is indicated by *senăt*, the modified macron indicating the slighted enunciation of the long *a*. In ordinary conversation the word often practically becomes *senět* or even *senīt*. Observe the change of the vowel sound from *a* to *e*, then to *i*. This alphabetic order is characteristic of many fundamental changes in language forms which occur as generations pass.

In *arise*, the *a* is almost like *a* in *tăsk*, but is somewhat obscured, thus resembling also the *e* in *rĭvēr*. The sound is indicated by an italic *a* with dot above (*ă*) thus showing both its slighted or hurried enunciation and its close relation to the more distinct sound indicated by roman *â*.

In *accuse*, the sound of *a* is not the so-called short sound, but is further shortened or slighted. It is indicated by an italic *a* with breve above (*ă*) to indicate both its slighted enunciation and its relation to the short sound as represented by the roman *â*. The sound of *c* is uttered only once.

In *cellar*, *c* has the sound of *s*, and only one *l* is

sounded. The *a* is not silent, nor is it Italian *a* (ä); it is equivalent to *ē*, which is discussed in another paragraph. Without respelling, the word may be marked çĕl'fār.

### *Words for Practice*

rare	mast	pass	advance
marvel	war	far	vast
distant	prepare	saw	fair
want	bear	said	idea
mature	many	parent	aside
alarm	awry	vocal	parcel
triumphal	hair	adult	toward

### *Other Sounds of e*

Illustrative words and corresponding phonetic forms:

pervert (1)		pĕr-vŭrt'
event (2)		ĕ-vĕnt'
recent (3)		rĕ'sĕnt
eight (4)	(e = ā)	āt
there (5)	(e = â)	thâr
ewe	(ew = ū)	ū
eel	(ee = ē)	ēl
sergeant (3)	(e = ä)	sär'jĕnt
English (6)	(e = ĭ)	ĭn'glĭsh

(1) There are two similar but slightly different sounds of *e* where it is followed by *r*, one in monosyllables and accented syllables, and the other in unaccented syllables. The untrained ear may not clearly distinguish the one from the other. Both appear in the word *pervert*. By uttering the first syllable lightly and accenting the second syllable, the difference between these sounds of *e* may be perceived. It has puzzled many. The symbol  $\tilde{e}$  is used to represent the first, or lighter;  $\hat{u}$  is used to represent the second, or heavier. Equivalents of  $\tilde{e}$  are *a*, *i* and *o* followed by *r* in unaccented syllables. A distinction is to be made between  $\hat{u}$  and  $\check{u}$ .

(2) The first *e* in *event* is a shortened form of long *e*. It is almost equivalent to short *i* ( $\check{i}$ ). Observe that it is considered good usage to slight the enunciation of long vowels in unaccented syllables, thus producing a modified or obscure form of them. This is indicated by marking them with the modified macron ( $\bar{^}$ ).

(3) Observe that in *recent* the second *e* is not given the full short sound of *e*, but that the enunciation of it is slighted almost to the point of omission. It is printed in italic to distinguish this obscure sound from that of short *e* in accented syllables, which is indicated by a roman letter with a breve. In general, the use of italic letters in representing

elemental sounds in this system signifies an obscuring of the sound.

(4) Without respelling, *eight* may be marked ~~ei~~/~~gh~~t.

(5) The two letters *th* in *there* represent but one sound, and so form a digraph. The bar across them is to indicate a voiced (vocalized) *th* to distinguish it from the voiceless (aspirate) *th*, as in *thin*.

(6) Observe that, in *English*, *n* represents the sound of *ng* and is marked accordingly. The letters *sh* form another digraph representing a voiceless hissing or hushing sound.

### *Words for Practice*

erase	where	queer	present
new	sliver	shiver	behave
accident	weight	screw	learn
leather	person	fern	breath

### *Other Sounds of i*

Illustrative words and corresponding phonetic forms:

sir (1)	(i = û)	sûr
elixir	(i = ĕ)	ĕ-lîk'sēr
police (2)	(i = ĕ)	pō-lēs'

(1) In the study of *sir* and *elixir* see the discussion of *ē* and *û* in note 1, page 48.

(2) In *police* the sound of *i* is from the French, in which it is the regular sound for this letter.

### *Words for Practice*

stir	machine	Virginia
pique	fir	mirth

### *Other Sounds of o*

Illustrative words and the corresponding phonetic forms:

orb		ôrb
soft (1)		sôft
to (2)	(o = $\overline{oo}$ )	t $\overline{oo}$
wolf (2)	(o = $\overline{oo}$ )	w $\overline{ool}$ f
son	(o = $\ddot{u}$ )	s $\ddot{u}$ n
work (3)	(o = $\hat{u}$ )	w $\hat{u}$ rk
obey (4)	(e = $\bar{a}$ )	ô-bâ'
nation (5)	(ti = sh ; o = $\ddot{u}$ )	nâ'sh $\ddot{u}$ n
connect (5)		k $\ddot{o}$ -n $\ddot{e}$ kt'
actor (3)	(o = $\bar{e}$ )	ăk'têr

(1) When properly given, the sound of *o* in *soft* is that of neither *ô* nor *ö*, but is intermediate between them. The mark used is a combination of the two just given, ( $\circ$ ).

(2) Without respelling, the pronunciation of *to* may be indicated by tō, and that of *wolf* by wōlf.

(3) In the study of *work* and *actor*, see the distinction made between the sounds of ē and û in note 1, page 48. Without respelling, the pronunciation of *actor* may be indicated by æc'tōr. The pronunciation of some words can be indicated only by respelling.

(4) Observe the slighted or rather indistinct enunciation of the long *o* in *obey* as indicated by the modified macron. This allowable lightening is due to the lack of stress and to speed of utterance in passing over the unaccented to the accented syllable, and is not to be confused with the slovenly pronunciation that would reduce all unaccented vowels to one "uh" sound.

(5) In *nation* and *connect*, the sound of *o* is shortened almost to the point of omission as indicated by the italic form of the letter used in the respelled phonetic forms. Such a thing does not occur in accented syllables, nor in all unaccented syllables.

### *Words for Practice*

ton	do	lord	coffee
zoölogy	motor	major	horizon
cough	correct	dog	woman
who	other	worth	motion



*Other Sounds of u*

Illustrative words and the corresponding phonetic forms :

unite (1)		û-nīt'
urn (2)		ûrn
circus (3)		sûr'kŭs
rude (4)	(u = ōō)	rōōd
full (4)	(u = ōō)	fōōl

(1) In studying *unite* and *rude*, see the distinction between the two slightly different name sounds of *u* on page 38. Note the significance of the modified macron in the marking of the *u* in *unite*.

(2) In the study of *urn*, see the discussion of û and ē in note 1, page 48.

(3) Note the significance of the italic *u* in the phonetic form of *circus*.

(4) The pronunciation of *rude* and *full* may be indicated without respelling by rûdē and fûl.

*Words for Practice*

pure	bull	burn	inure
useful	intrude	furl	humorous

*Diphthongs*

A diphthong is a combination of two vowel sounds pronounced in one syllable; as, *oi* in *oil*, *ou* in *out*, *i* in *ice* (ä + ě).

A similar combination of consonant sounds, as *ch* (= tsh) in *chair*, *qu* (= kw) in *queen*, and *wh* (= hw) in *white*, are known as consonantal diphthongs. Observe the curious fact that in the pronunciation of *wh* as in *white*, the sound of *h* precedes that of *w*. The word may be regarded as thrown out in a rush of breath which is represented by the *h*. The *h* is an aspirate; it is not silent, though both the *h* and the *w* are almost so.

The combination of the "consonantal" *i* (or *y*) or the semivowel *w* with a following vowel sound has been called an *impure diphthong*. Examples are *genius* (*i* = *y*), *yard*, *wag*. In this connection it may be noted that *tedious* is to be pronounced tē'dī-ūs or tēd'yūs, not tē'jūs; *nature* is nā'tyūr, though nā'chūr is allowable in familiar conversation; and *verdure* is vūr'dyūr, though vūr'jūr is also allowable in familiar conversation. In the dictionary these double standards are indicated by a tie bar connecting the *t* or *d* with the following *u*, as, nā'tūr, vūr'dūr. Notice that the modified macron indicates a slighted or less marked sound of long *u*.

### *Digraphs*

A digraph is a combination of two letters used to indicate a single simple sound; as, *th* in *this*, *th* in *thin*, *sh* in *she*, *ng* in *sing*.

### *Glides*

In pronouncing a word composed of two or more elemental sounds, the voice utters each with remarkable rapidity, though each demands a change in the position of the vocal organs. The voice does not cease while the positions change, but, continuing without interruption, glides from one sound to the next in the easiest way. The result is that in addition to the sounds that are represented by letters, the spoken word contains also a number of intermediate sounds which are represented by no letters and are, or ought to be, very fleeting. Yet these can be detected by the trained ear. In certain combinations it is easy to prolong or exaggerate these intermediate sounds and give them a prominence which cultured speakers would not approve. For example, in pronouncing *able* it is easy in gliding from the sound of *b* to that of *l* to magnify the intermediate sound so as to make the word ā'bul. Therefore, to indicate the correct pronunciation more exactly and to warn against the error just indicated, the dictionary gives the form ā'b'l, the apostrophe appearing at the point of difficulty.

Other words for practice are *evil*, *gentle*, *spoken*, *people*, *solecism*.

For further study of pronunciation, the student is referred to the article on "A Guide to Pronuncia-

tion," to be found in the front part of the *New International Dictionary*. The subject is there treated with a fullness and a completeness which are impracticable here.

*Words for Practice in Dividing into Syllables,  
Marking Accent, and Giving Phonetic Signs*

animal	shamrock	sociable
abide	minister	undulatory
notorious	secretive	legislative
incomplete	incorruptibility	funereal
anxiety	augment	inquiry
declination	backbone	massage
cereal	content	present
heathen	mother-of-pearl	dislocate
remarkable	uvula	aspirate
through	allude	ask
lovable	walk	superb
least	clipper	arise
often	industry	sedimentary
pare	southern	increase
root	acidity	intervene
frank	furtherance	equable
judge	oatmeal	laryngeal
quench	sedition	vehemence
urban	incongruous	laugh
unequivocal	mirage	ago

sever	permit	placid
severe	hibernate	try
incognito	baker	luxury
far	dismal	freeze
yarn	exhaust	what
preface	idea	morbid
sojourn	think	toil
shrink	foot	finance

#### STUDY OF PRIMITIVES BEFORE DERIVATIVES

It is well known that some words are simple or original in form while others are made by a combination of a simple word and one or more additions. The former are primitives, and the latter are derivatives. For example, *home* is a primitive; and *homeless*, being formed by the addition of *less* to the simple word *home*, is said to be derived from *home*, and so is called a derivative. Any addition placed before a simple word is called a prefix (*pre* means *before*), and any placed after a simple word is called a suffix, (*suf*, a form of *sub*, means *under* or *after*). (See later paragraphs on Prefixes and Suffixes, page 72.) The main part of every derivative is of course the primary word upon which it is based. In its simplest form this is called the root or the stem. A derivative is therefore likened to a plant, of which the prefixes and suffixes are the branches.

It is readily seen that upon one primitive may be built several derivatives, all having a common idea, but all differing from one another as the central idea is presented with the varying modifications. It follows that, for the sake of a thorough understanding of a derivative, special attention should be given to the primary word on which it is based. There is economy in doing so, for in learning the meaning of a primitive the student at one effort gains a key to the meaning of all the derivatives that contain it. Besides, primitives are always treated quite fully in the dictionaries, while less space is generally given to derivatives. For example, *scribe*, which means *to write*, is a primitive word which in this form, or in the modified form *script*, serves as the common basis of many derivatives. Wherever it appears it, of course, carries the idea of writing; and a pupil who knows this is not only relieved of much unnecessary word study, but as one derivative after another comes to his attention he recognizes it as a word with which he is already partially acquainted, and his interest and profit are correspondingly increased.

To an increasing knowledge of primitives should be added a knowledge of those modifying particles, prefixes and suffixes, beginning with those in most common use, many of which are fully defined in every

large dictionary. These are word-building materials that are used over and over. For illustration, *in* as a prefix generally means *in, within, into, towards* or *on*, except in adjectives and adverbs, where it generally means *not*. It sometimes takes the form of *il, ir, im* or *ig*, to harmonize with the first letter in the primitive word to which it is attached. *Inscribe* therefore literally means to *write within* or *on*, and *inscription* is the corresponding noun form which means, broadly, a *writing within* or *on*. Having the simple and fundamental meanings in mind, the pupil is well prepared to understand any specific application of the words. The word *impure* (*not pure*) illustrates the use of this prefix in an adjective, and the change of the *n* to *m* for the sake of smoother pronunciation.

#### DEFINITIONS CLASSED ACCORDING TO PARTS OF SPEECH

A word is the sign of an idea, but it is well known that there are far more ideas than there are words in any language. The result is that a word is often used to represent several, or even many, different though related ideas. The first step in indicating the sense in which a word is used is to give the part of speech to which it belongs, as *n.* (noun), *v.* (verb), *a.* (adjective), *adv.* (adverb), etc. A verb is further

classed as *v. t.* (verb, transitive) or *v. i.* (verb, intransitive). Whenever the same word belongs to two or more parts of speech, it is defined separately in each class. For example, the word *even* is used as a noun, an adjective, an adverb, and a transitive verb. In large dictionaries it accordingly appears in heavy type at the beginning of each of four corresponding series of definitions.

It will be seen that in consulting the dictionary some knowledge of grammatical classification is desirable ; indeed, the more knowledge one possesses, the more one can get out of any such work of reference. Yet only very slight training in English is necessary for beginning.

If the pupil can distinguish the part of speech to which a given word belongs, he is not only better prepared at the start to understand the application of it, but he can economize time and effort by turning at once to the right series of definitions.

#### SELECTION FROM A SERIES OF DEFINITIONS

The use of one word to represent a number of ideas is most forcibly illustrated by those series of definitions in which, beginning with a simple or elemental idea, the word is shown to have been applied to one related idea after another, and so to have served a manifold purpose. For example, the word *head*



as a noun is used in more than thirty different ways, — notice the numbered or lettered definitions in the dictionary, — but through all of them the original idea may be traced. In some cases it is quite possible here as elsewhere to perceive the order of development. First applied to the upper division of the human body, the word was by successive steps applied to other things that are attached to it or that bear some real or fancied resemblance to it in form or function. The growth of hair upon it is called a head of hair. The intellect, which has its seat within, is often referred to as the head in such a phrase as *a wise head*. As the intellect, through the will, directs and controls the members of the body, the next step was to apply the word to a person who directs or commands others, as the *head* of an institution or the *head* of the army. So, a place of leadership or honor became known as the head; for example, the *head* of the profession. The following phrases indicate other common uses of the word, the reasons for which will be easily perceived: ten *head* of cattle; a *head* of cabbage; the *head* of a bed; the *head* of a procession; the *head* of a stream; the *head* of a nail.

It might be argued with some show of reason that the application of the same word to many different things is very confusing and difficult to learn, but

there is not the slightest doubt that this is far simpler and easier than to learn a new word for every idea. The fundamental idea running through every series unifies it and effects a marvelous economy in vocabulary and a corresponding relief to everybody. There is even a pleasure in detecting similarities and in using words figuratively in this manner to express them.

Definitions are lettered rather than numbered when the different applications of the word are closely similar or have a marked characteristic in common. For illustrations, see *lamina*, *despot* 1, and *table*, *n.*, *q.*

For the further assistance of the inquirer, the classification of some definitions is given by indicating the subjects to which they apply. See, for example, the word *race*. One definition is headed *Ethnol.* (Ethnology); another, *Zool.* (Zoölogy); and still another, *Hort. & Agric.* (Horticulture and Agriculture). See also *division*, *quarter*, *group*, *distribution*.

It perhaps is not necessary to state that every usage of a word that is characterized as *Archaic*, *Obs.* (obsolete), *Obsoles.* (obsolescent, that is, passing out of use), *Slang*, *Colloq.* (colloquial), or *Dial.* (dialectal) is objectionable for formal speaking or writing and is ordinarily to be avoided. Its appearance in

the dictionary does not give it a reputable standing, but merely serves as a record and a warning.

There is disagreement among lexicographers as to the best order of arrangement of the definitions in a series. In Webster's *New International Dictionary* and nearly all other dictionaries of good standing, what might be described as the chronologic or historical order, just illustrated, is followed. In it, after the etymology, the original meaning comes first, then the later derived meanings. By this plan the key to the whole series is presented at the beginning. An order that is to some extent the reverse of this is followed by the *New Standard Dictionary* with the idea of placing first, for the convenience of the seeker, the definition of the word as most commonly used.

It is obvious that, in the study of any word having several definitions, care is required to discriminate between the various shades of meaning and to select that definition, if any, which applies to its use in the particular passage in mind. This calls for the exercise of sound judgment, and is therefore excellent practice in correct thinking as well as in the correct use of English.

Among the numberless items of interest other than definitions which every large dictionary includes are characters in fiction, legend and mythology, histori-

cal names, and others in great variety. For illustration, see Micawber, Sleeping Beauty, Prometheus, Lady of the Lake, Lady of Shalott, Wars of the Roses, etc.

#### SECOND SERIES OF DEFINITIONS

It would be a long task to describe all the particulars in which the dictionary makers have tried to serve the convenience of readers while crowding many hundreds of pages with accurate information in the most condensed form. One is by inserting at the end of the regular series of definitions, when there is occasion, a second series defining combinations of two or more words one of which, in each case, is the main subject of definition. Many of the combinations so given are idiomatic or technical expressions. In no instance could the meaning be made quite clear by defining the separate words; each combination or group must be considered as a whole. For illustration, see *little*, and observe that a second series begins with *little auk*, which is followed by *Little Bear*, and other pairs or groups down to *little world*. Note that after the first group the repeated term *little* is not printed in full, but is represented by its initial letter *l*. In the case of *Little Bear*, both words begin with capitals because the couplet is a proper name. Observe, too, the alphabetic

order of the words that immediately follow the common word *little*, which makes easy the finding of any particular group.

In this series may be found an illustration of two definitions for the same group, one of which is marked *a* and the other *b*. It begins with the couplet *little king*.

For further study, see *common, cold, light, public, dead, come, bring, break, point*.

### *Practice Groups*

Who was the "First Gentleman of Europe"; the "Man in the Iron Mask"? What is a continental divide; committee of the whole; salt-rising bread; cold wave flag or signal? Which is the City of Brotherly Love? What is the meaning of "the inside track"; of "to bring to"?

### ETYMOLOGY OF WORDS (ORIGIN AND DEVELOPMENT)

In the advanced schools, if it has not been already done in the upper elementary grades, the students should learn that most of the English words now in use have an ancient origin, that they came from various races and nationalities, that the pronunciation of some of them has varied in different countries and at different times, that all living languages undergo change, sometimes rapid, sometimes slow,

and that the words of any language are an index to the mind, character, and experiences of the people who use them.

The "Brief History of the English Language," which appears in the fore part of Webster's *New International Dictionary*, may be read with profit. It is not to be expected that a student will at this stage dig deeply into the subject of philology, but a little general knowledge of the development of his native language ought to give him a deeper and more intelligent interest in that wonderful system of word signs which his necessities and his pleasures compel him to use daily.

The origin of most words has been traced back through one or more ancient or foreign languages, and a statement of the early forms of each word, or of each significant part of it, the language whence it came, and the meaning in which it was used, is given within brackets. This constitutes a sort of condensed history of the word up to recent times, or, in other words, its etymology. Somewhat the same interest attaches to this earlier development of a word as to the later development described in the paragraphs on "Significance of Parts of Words," page 72, and "Selection from a Series of Definitions," page 59, for both are parts of the same process.

In his study of etymology the scholarly specialist notes the languages in which each word has appeared, finds that the languages are sometimes quite separate in racial origin, traces the exact changes in form and meaning, and, as a result, is able to deduce laws that govern the evolution of language, and to prove the existence of hitherto unknown relations between tribes and races.

In marked contrast, the unscholarly person who has a strong leaning toward the narrowly practical, whose only concern is for the immediate need, who is contented with superficial knowledge, who has little taste for the science and art of language and who gives the dictionary only a rare and hasty glance pays no attention to etymology. He wants only the most common modern definition and has little patience for the study of fine shades of meaning. For his purpose the dictionary might be reduced to one fifth its size.

The student in the public school or college will take middle ground. He will at least observe the simple and perhaps oft recurring form of the word as given within the brackets, and the meaning of it. If the word comprises two or more significant parts, he will observe the form and meaning of each. With this fundamental information in mind he will hold the key not only to the accom-

panying series of definitions, but also to all other words based on the same primitive form. For example, the word *crusade* is shown to have come through the French language from the Latin *crux*, meaning *cross*. The underlying significance of the word is therefore *cross*, with some modification indicated by the addition of the last three letters. The question arises, What has *crusade* to do with *cross*? The adjoining definition indirectly answers the question. *Crusade* was the name given to each of several military expeditions undertaken by Christian powers to recover the Holy Land from the Mohammedans. It is a matter of history that the cross symbolized to the Christians the cause for which they were contending, and that it formed the design which appeared on their banners and elsewhere. It would perhaps have been impossible to devise another word which could so fully and correctly describe one of those famous expeditions, all of which were characterized by burning religious zeal.

The more modern definitions of the word, all based on the original application of it, as here described, lack much of vividness, spirit and force when taken alone. One of them reads, "Any enterprise undertaken with zeal and enthusiasm; as, a crusade against intemperance." Of course, this



definition is quite correct and is as plain as could be expected; yet, notwithstanding the illustrative phrase at the end, it seems somehow incomplete and tame until one understands the etymology of the word defined and the way it was first used. There is an illuminating power in the history of the word. In fact, the word means most in every use of it to the person who is familiar with the history of the events that called it forth.

The student who has read Roman history, and every boy or girl who has advanced far enough in his study of Latin to take up the translation of Cæsar's *Commentaries*, will observe with appreciative understanding that the word *crusade* came from the Latin language through the French. They all know that the Romans conquered Gaul, including what is now called France, and that as years passed, Latin, the language of the Romans, in modified form, became the prevailing language of the conquered natives. As the French provided the name for those great expeditions or wars, it would be inferred, and correctly, that they took a very active part in them. The English and others adopted the name, and with a slight change in pronunciation long ago it became a part of our language. This illustrates how one may sometimes get from the dictionary hints of historic events and other in-

fluences that have brought forth new words, perhaps coined them out of old, and have passed them from one language to another.

A few additional examples of etymology, selected promiscuously from the great number given in the dictionary, will perhaps interest the beginner and indicate more widely the scope of this subject. *Alphabet*, it is seen, comes from the names of the first two Greek letters, alpha and beta (*a* and *b*). *Wednesday* was Woden's day, named in honor of the "highest god of the Teutonic peoples." This accounts for the presence of the *d*, now silent in standard English, but still sounded in some dialects, as in the dialect of the neighborhood of Liverpool, England. The word has come down from our heathen Saxon forefathers. *November* or *Novembris* means ninth, being derived from the Latin *novēm*, nine. The word *mensis*, meaning month, is understood. The abbreviation *sc.* (scilicet), used in the dictionary in this connection, means *understood*, as may be found by referring to the list of abbreviations inserted just before the main body of the dictionary. In the days of the Romans, November was the ninth month, as the year began with March.

*Lunatic* had its origin in *luna*, the name of the moon. Under the word *lunacy* it is explained that formerly the changes of the moon were supposed to

affect the mind sometimes and to produce a kind of intermittent insanity. *Quart*, like *quarter*, meant *fourth*, and was so called because it is one fourth part of a gallon. *Good-by* is found to be a contraction of an old form of address at parting, "God be with ye." *Enthusiasm* is based primarily on the Greek words *en*, in, and *theos*, god, and meant *inspiration by a divine spirit within*. That was a fine origin, now often overlooked or forgotten. *Petroleum* is from two old words, *petra*, rock, and *oleum*, oil, and is literally rock oil. The first part was strikingly used by Christ as a surname for one of the Apostles, Peter. The recurrence of the same part in other words, as in *petrel*, a sea bird, supposedly so named after Peter in allusion to his walking on the sea; and *petrify*, to convert into stone, will be observed.

The repeated use of *man* or *manu*, hand, running through several pages of the dictionary, of *meter*, measure, and of *therm*, heat, illustrates one phase of word making and suggests the economy of early learning the etymology of words.

Certain classes of words have originated in very interesting ways. Some geographic names have taken secondary meanings, as *meander*, at first the name of a winding river in Asia Minor, and *damask*, which meant made in Damascus. In a similar way some biographic names have come into the

language, as *boycott*, from Capt. Boycott, an Irish land agent, and *raglan*, from the name of an English nobleman who set a style in coats. Some have been adopted because of their historic significance, as *shibboleth*, an ancient password, and *exodus*, literally *a going out*, used to describe the migration of the Israelites from Egypt. Some were used at first to imitate similar sounds as *hiss*, *crash* and *mamma*, the last being one of the child's first half-conscious utterances. Very many are modified forms of others that are familiar as different parts of speech, as *shovel*, a modified form of *shove*; *flight*, from the verb *fly*; *strength*, from *strong*.

The study of ancient mythology has given us some words or has put life into old ones that existed before. *Volcano* is from the Roman Vulcan, god of fire. The rumbling of the earth, and escaping jets of steam and smoke, indicated to the ancients his giant forges at work beneath the mountains. The word *cereal* is from Ceres, the goddess of growing vegetation. How plants grow is a mystery to this day, and it is not surprising that in the rude ages men were impressed by this phenomenon, which they could not explain, and attributed it to a divine spirit whom they called *Ceres*. *Echo* came to us through the Latin language from the earlier Greek, and at a very early age it was the name of a nymph, the daugh-

ter of Air and Earth, who, for love of Narcissus, pined away until nothing was left of her but her voice.

### SIGNIFICANCE OF PARTS OF WORDS

As has been learned, there are three classes of significant forms, basal forms called stems or roots, prefixes, and suffixes.

#### *Prefixes*

The following common prefixes illustrate the fact that a part of a word may have a significance of its own. In many cases the part is an old word which has lost its individuality. They also illustrate the changes in form brought about by combining parts to build new words, and the ease with which, in the study of words, some of the significant parts may pass unrecognized.

*A* or *ab*, meaning from; *ad* (*ac, ag, al, am, an, ap, ar, as, at*) — to, toward; *circum* — around; *con* (*co, col, com, cor*) — with, together; *e* or *ex* (*ef*) — out; *in* (*il, im, ir*) — in, into; *in* (*ig, il, im, ir*) — not; *ob* (*of*) — against, facing; *per* — through; *post* — after; *pre* — before; *re* (*red*) — back; *sub* (*suc, suf, sug, sup, sur, sus*) — under, after.

It will be observed that the last letter of the prefix is sometimes changed to the same as the first letter of the stem, or to some other letter whose sound

harmonizes with that of the first letter of the stem, as in *ad-cuse*, properly accuse; *ad-tract*, attract; *ob-fend*, offend; *sub-fer*, suffer; *in-port*, import. It will also be observed that the two adjacent letters in the perfect word as just described represent sounds that both are produced with the organs of speech in the same position. For example, *m* and *p* in *import*. This change is for the sake of euphony, for otherwise such words would be difficult to pronounce and disagreeable to hear. Some derivatives like these are easily understood, as *attract*, to draw to or toward, *tract* meaning *to draw*; but others require a little thought, as is the case with *suffer*. *Fer* here means *to bear*, and the word as a whole presents the figure of a person under a heavy burden which he bears. Any one who has really suffered can appreciate the force of the word.

### *Additional Prefixes for Study*

hydro	bi	poly	hemi
psycho	anti	pro	epi
dis	ante	mono	counter

Observe that when listed separately in the dictionary as prefixes all such forms are immediately followed by a hyphen. This mark is one means of distinguishing them from the same forms used as words. See *counter*, for example.

While the study of any prefix alone is profitable, it is wise to make practical use of it in a number of words before leaving it.

### *Suffixes*

*Less*, means without, free from ; *fy*, to make ; *let*, little (whence it is called a diminutive) ; *en*, made of ; *ly*, like ; *est* indicates the superlative degree of adjectives and adverbs ; *er*, one who, that which (it also has other meanings). With these meanings in mind, the student the more readily understands words that contain the corresponding suffixes, as *homeless*, *beautify*, *booklet*, *golden*, *brotherly*, *lightest*, *baker*. Like prefixes, suffixes are also given in their proper alphabetic order in the body of the dictionary. It is to be noted too that every suffix that is listed separately has a hyphen before it. This distinguishes it as a suffix. The student is advised to select and define one or more words containing each suffix that he may study.

### *Additional Suffixes for Study*

ful	y (ie)	metry	itis
ness	oid	ish	logy
some	ward	ee	able
dom	ship	ed	ite

*Stems or Roots*

Prefixes and suffixes are mostly modified forms of what were or are independent words. They now of course occupy less prominent places. The chief significant part of every derivative word is the stem or root, and to this the prefix or suffix is joined. Philologists make a distinction between a stem and a root, but for present purposes none need be made.

The following are given as illustrations of those primitive forms which serve as bases of numerous derivatives.

<i>graph</i> , to write	<i>liber</i> , free
<i>mater</i> , mother	<i>liter</i> , letter
<i>fid</i> , to trust	<i>ject</i> , to throw
<i>equ</i> , equal	<i>fact</i> , to do, to make
<i>carn</i> , flesh	<i>dict</i> , to say
<i>sci</i> , to know	<i>brev</i> , short
<i>flu</i> , to flow	<i>voc</i> , voice

*Words for Study*

telephone	hydrophobia	ancestor
antipodes	peninsula	courage
fifteen	vociferate	penalty
intercept	missive	compress
ignominy	asperity	influence
reticule	quadruped	represent



supercilious	sacrifice	protrude
centennial	monotone	retort
etymology	anniversary	gladiator

### COMPOUND WORDS

A combination of two or more distinct words used as one is called a compound word. Hyphens are used to connect the component words except where long and familiar usage warrants the omission of them. The prevailing usage is of course indicated in the dictionary.

#### *Illustrative Words*

headlight	so-called
snowball	heart-rending
snow-bound	hard-hearted

### SYNONYMS

Synonyms are words of the same language having the same or nearly the same essential meaning. Rarely do any two words have exactly the same meaning or application, even though they agree in their broad or general significance. Synonyms often have their origin in different languages or are based on different metaphors. It has doubtless already been observed by the student that, when

resolved into their elements, very many English words are condensed metaphors.

For example, *carry* is from the Old French and is based on the figure of a burden being removed in a car (cart), while *transfer*, from the Latin, a synonym of it, gives the idea of a burden being borne across a space by a person or a beast. Again, *obstinate* is from the Latin and suggests the figure of a person or animal standing persistently with face or head toward an approaching thing to be opposed ; and one of its synonyms is *stubborn*, derived from the Anglo-Saxon, which presents the picture of the stump of a tree, something that is undesirable and can be removed only with difficulty.

The distinction to be made between the several words in each of hundreds of groups of synonyms is discussed at the end of the regular series of definitions of one of the words, following the caption *Syn.*

Manifestly, the use of the synonym which most accurately and aptly expresses the meaning of the speaker or writer is a marked indication of culture and a discriminating mind ; and, conversely, the use of an inappropriate word is an evidence of lack of training in English, of inability to make fine distinctions between ideas, or of gross indifference and carelessness.

The English language, being composite and draw-

ing its vocabulary from many peoples, is peculiarly rich in means of expressing with exactness those innumerable modifications of elemental ideas which high civilization and culture have produced.

A small vocabulary denotes a narrow range of ideas. The study of the dictionary together with the reading of good literature and listening to the utterances of cultivated persons will widely extend one's stock both of words and of ideas, for they go together. A simple illustration of an almost childish, yet quite common difficulty must here suffice :

A child or an untutored adult might describe an apple as *good*, that being the most suitable word other than slang that occurs to him. The chief objection to this adjective is not that it is inappropriate, but that it is very broad in its application and so lacks definiteness. There are many ways of being good, as one may know without consulting the dictionary, and the substitution of a more specific word, such as *sound* or *delicious*, both in such a case being synonyms of *good*, would make the statement far more definite, clear and satisfying.

### *Synonyms for Practice*

Look, see.

High, tall, lofty.

Raise, lift, elevate.

Whole, total, entire, complete, perfect, intact.

Content, satisfy.

Custom, habit, usage, practice.

Fast, rapid, swift, fleet, speedy, hasty.

Enormous, immense, huge, vast, prodigious, stupendous, gigantic, colossal.

Brave, courageous, gallant, daring, valiant, valorous, bold, heroic, intrepid, fearless, dauntless, stout-hearted.

Above, over, on, upon, beyond.

Abandon, desert, forsake, leave, quit, renounce, forego, resign, give up, surrender, relinquish.

Calm, tranquil, serene, placid, peaceful, cool, composed, collected, unruffled.

Tire, fatigue, exhaust, jade, fag.

#### SPECIAL SECTIONS

##### *Gazetteer or Geographical Dictionary*

Histories, books of travel and periodicals are full of references to places concerning which intelligent readers desire further information. What is it? Where is it? How large is it? How should the name of it be pronounced? These are questions that frequently arise, and the convenience of having the answers just at hand in the dictionary would be highly appreciated by many who are not now aware of the existence of this section.

The system of signs and abbreviations used in Webster's *New International Dictionary* makes possible the condensing of much information within small space. Observe, for example, that the population is given in even thousands, as 9 (9000) or 6,581 (6,581,000).

*Names for Practice*

Adams	Cheyenne	Fukushima
Aden	Dardanelles	Ghent
Baalbek	Dead Sea	Gizeh
Barre	Dry Tortugas	Gloucester
Beirut	Dwina	Herculaneum
Berlin	Echo Cañon	Jerusalem
Cadiz	Florence	Karlsbad
Cavite	Friesland	Mecca

How long is the Amazon? What is the area of the State of New York? When and where did the battle of Hastings occur? How many different applications of the name Ithaca are given?

*Biographical Dictionary*

This contains the names of thousands of noteworthy persons, a slight description of each, the pronunciation of each name, and the dates of birth and death. The omission of the latter date indicates that the person was living when the dictionary

was published. If the student is not certain how to spell or pronounce correctly the name of any person included in the list, or wants the full name of which he has only a part, or wants a few words of description for the purpose of identification or otherwise, or wishes to know in what period he lived, he can, with a moment's effort, find in this section precisely what he desires.

*Names for Practice*

Jane Addams	Mendelssohn
Fouqué	John Muir
John Fiske	Pepys
Goethals	Pindar
Gail Hamilton	Ptolemy
Geikie, the geologist	Recamier
Irving, the actor	Rochambeau
Junius	Stanley, the explorer
Mascagni, the composer	Welsbach

When was Lincoln born? What relation did Robert Browning and Elizabeth Barrett Browning bear to each other, and is either of them living?

*Arbitrary Signs*

(Used in writing and printing)

Words are the chief, but not the only, means of representing ideas. In the section on "Arbitrary

Signs” are given many of the technical signs commonly used in some of the arts and sciences. They are likely to occur in the reading of any non-professional person and to require explanation. They are classed as follows :

Astronomical, botanical, chemical, mathematical, medical, meteorological, miscellaneous, monetary and commercial, musical, typographical.

Observe the alphabetic order of these terms.

### *Some Additional Dictionary Signs*

*(Used in Webster's New International Dictionary)*

† means obsolete variant of. For example, see *basquette*, which by this sign is shown to be an out-of-date form of *basket*. In the *New Standard Dictionary* the dagger (†) means *obsolete*, and the double dagger (‡) means *variant*.

|| means that the word immediately following it is from a foreign language and that it would usually be printed in italic letters if used in English. For example, see *fiancé*; *viva voce*; *à la carte*; *attaché*; *mademoiselle*. The *New Standard Dictionary* contains no corresponding distinctive sign.

= (the sign of equality) means that the two terms which it joins have the same meaning. Where the first term is missing, the word used as the subject

of the definition is understood to take its place. For example, observe the 5th definition of skull. It is simply “ = 1st *scull*, 1.” The word *scull* appears four times as the subject. This reference applies to the first of them and to definition 1, following. In the *New Standard Dictionary* the words “same as” are used instead of the sign. For further practice, see *Johnny*, 2; *deviation*, 7; *devil*, 8.

When figures preceded by  $\times$ , the sign of multiplication, are inserted under an illustration they indicate the size of the illustration as compared with the object it represents. For example, the pictures of the carpet beetle are marked “  $\times 3$  ” to show that each picture is three times the length and breadth of the real beetle. See also *cartilage*. In like manner, fractions are used. For example,  $\frac{1}{6}$  appears under the picture of the catbird to show that in length and breadth it is  $\frac{1}{6}$  the size of the real catbird. The corresponding signs in the *New Standard Dictionary* would be  $\frac{3}{1}$  and  $\frac{1}{6}$ . None of these figures should be mistaken for other figures used to refer to particular definitions adjoining the respective picture. For example, a figure, as 9 under the picture of an *imperial*, may indicate the number of the definition which it illustrates, not the relative size; and figures or letters are used to indicate both two or more related pictures and the various parts



of a picture, as illustrated under *golf*, *ship*, *saddle*, *sextant*, *elbow*.

### *Pictorial Illustrations*

Words serve well to represent ideas that are already understood, but they cannot clearly present to the mind ideas of material objects the like of which have not been seen. For the latter purpose, the object itself, a model of it or a picture of it serves best. A picture is usually the most convenient to obtain. For example, pages of description would fail to give as clear an idea of a locomotive as a picture of it would. Pictorial illustrations, then, are highly important and necessary features of a dictionary, and they abound in its pages.

In a section near the end of Webster's *New International Dictionary* many hundreds of pictures, from the main body of the book, are repeated. Each of them is named and under each of them is given the page of the dictionary on which appears both the corresponding definition and a similar picture. These are merely selected pictures of objects that are related to each other. All are classified and grouped by subjects, and these are given in alphabetic order in the index which is inserted at the beginning of the section. Observe that the pictures in each subject are arranged in

alphabetic order by their names. If, for example, the subject of inquiry be farm machinery, the pictures of it are classed under *agriculture*; if it be insects, under *zoölogy*. Following the alphabetic order, the pictures of *insects* follow the pictures of *fishes*, and the *flea* follows the *dragon fly*. Note the great variety of insects, fishes, etc., that may here be compared with ease. By means of the pictures, also, one may in some cases easily identify an object or an animal the name of which is not known.

### THE CYCLOPEDIA

After the dictionary, the cyclopedia (variously written cyclopædia, encyclopedia, encyclopædia) is the work of reference most generally and most often consulted. It contains information in all departments of knowledge, or on all subjects in one department, and it may be published in one volume, or in several. The first part of the name, *cyclo*, circle, indicates the comprehensiveness of the plan as well as the completeness of it, and the last part, *pedia*, that is, the bringing up of a child, indicates the educational character of the work. If all departments are included, the work is called a general cyclopedia; if only one department is included, as electricity, mechanics or music, the work is called special or technical.

Each topic is treated in a separate article, and all the articles are arranged in alphabetic order by topics. A slight familiarity with the dictionary therefore will enable one to find any desired article in the cyclopedia, provided one has the judgment and skill to select an appropriate word, a noun, that shall indicate the subject of it. Generally it is easy, with a little practice, to do this. With the subject word in mind, the student first determines which volume in any series of two or more contains the article. This he does by observing the two guide words or their abbreviations on the back of each volume as it stands on the shelf before him. They indicate the first subject and the last treated in the volume. With the right volume in hand, he next finds the page on which the article begins by observing the guide words or their abbreviations which are printed at the tops of the pages as in the dictionary. For example, if he is seeking information about Benjamin Franklin, he looks first for Franklin, then for Franklin, Benjamin. If he wishes to know about King Henry II, he looks first for Henry, then for Henry II, and is careful to note whether the article before him treats of a king of England or of a king of some other country. The title, king, is considered subordinate to the name, Henry.

Again, suppose the subject of inquiry to be the

classification of mankind and the characteristics of races; he may then have difficulty in finding anything on these topics, though he may be quite confident that the work contains something. The trying point is to select the right subject word. He may try *classification*, *mankind*, and *characteristics*, only to be disappointed. He may then try *race*, doubtfully, and expecting to find only matter that would be of interest to sportsmen. This, however, may prove to be a lead in the right direction, for though little or no satisfaction can be obtained from the short article itself, the cross reference at the end, *See Ethnology*, gives the exact word wanted. Another way to obtain the word is to consult the dictionary. There, under the word *race*, the definition that applies is headed *Ethnol.* This abbreviation is a hint, though such would not always be the case.<sup>1</sup>

Though the dictionary is professedly a work in one department of knowledge only, the English language, and though the character of it is fairly distinctive, the scope of it has become so broad that the fields covered by it and by the cyclopedia overlap here and there, so that even well-trained

<sup>1</sup> The student should be warned that the misspelling of a subject word would probably prevent his finding the word and the desired reference.

persons are occasionally uncertain which work will give the better service. The wider the range of one's knowledge, the easier it is for him to add to his store of it.

As may now be guessed, one must sometimes, for a subject word, make a choice between a common name and a technical name for related things. For example, shall it be *Coins* or *Numismatics*; *Animals* or *Zoölogy*; *Statues* or *Sculpture*? The two members of each couplet do not mean the same thing. The first is more distinctively concrete and applies to individual objects or conditions, while the second is broader and applies to a science or an art. Both are proper subjects of definition in a dictionary, but only the second is worthy of any extended discussion in a cyclopedia. By the insertion of a cross reference, the inquirer is often directed to the right article for further study if he happens to err in choice. If the search proves at all difficult, it may be pursued as a sort of interesting game.

To suppose that all the information on any subject which a cyclopedia can give is always to be found in a single article is to lose sight of the fact that, for the convenience of the reader, many subjects are treated in parts, each of which is inserted in its proper alphabetic place by topic heading. Here may be a fine opportunity for the student to exert his power

of analysis, or the reverse process of synthesis, in selecting the most promising topic for reference.

A similar difficulty may arise in choosing between a general term and a specific term. For example, *Fish* and *Trout* are related terms, one broad or general and including the other, which is specific. Both may be subjects for discussion in the cyclopedia; but, even where they are so used, the articles are very different from each other, and the two together do not by any means exhaust the resources of the cyclopedia in this field of inquiry. Additional articles may be found under the headings *Fish Culture*, *Fisheries*, *Cod* and numerous others.

Some long articles are divided into paragraphs or short chapters, each of which is headed with the topic of which it treats. This facilitates the finding of references. The pronunciation and the etymology are sometimes indicated.

In selecting a cyclopedia for reference or for purchase, it should be borne in mind that cyclopedias differ widely in character and size. Some are elementary and small and are well adapted to children; others are scholarly and exhaustive, and are best adapted to well-educated adults; still others occupy middle ground and are preferable for general use. Little confidence is to be placed in some that bear high-sounding titles, for they give evidence of being

largely the work of novices with shears and paste. The reputation of the publisher should serve as a guide to intending purchasers.

Even the best cyclopedias soon become unreliable, owing to the rapid progress in invention, discovery and social development. How to meet this difficulty has long been a study. To keep pace with the times, some publishers issue every year a new volume containing corrections and extensions of the old. After a period, the substance of the accumulated "year books" is incorporated into a new edition of the main work. To be sure, then, of obtaining trustworthy information on some subjects one must supplement his reading of the main work by reference to the year books, if any, of later publication. Other devices to meet the difficulty just mentioned have been tried. The real age of a work dates from the year of copyright, not from the year of printing.

**REFERENCE WORKS IN PARTICULAR  
SUBJECTS**



Science, art, literature, philosophy, — all that man has thought, all that man has done, — the experience that has been bought with the sufferings of a hundred generations, — all are garnered up for us in the world of books. There, among realities, in a “substantial world,” we move with the crowned kings of thought.

— EDWIN P. WHIPPLE.

## GEOGRAPHY

THE breadth of this subject is suggested by a list of its chief divisions, *mathematical* geography, *physical* geography, *biological* geography, *political* geography, and *commercial* geography.

Though there are special books of reference devoted exclusively to some phases of this subject, the student must depend largely upon treatises and descriptive works of a popular character. Some high school and college textbooks serve well for reference when exhaustive treatment is not required. The accuracy of old publications that treat of conditions which man may change is to be questioned.

### THE ATLAS

The atlas is a collection of maps specially arranged for reference and bound in a volume. Such a work is of increasing usefulness in these times when by the marvelous inventions of swift means of communication and travel the whole world is more and more becoming one great community. Whatever affects the lives and character of men in any one region is of interest in every other region. The beauty and riches of each are open to all.

The definiteness and clearness of one's ideas of anything that has place are decidedly increased by learning its location. This explains why the use of the atlas results in an improved understanding and a more retentive memory. Unless a substitute be employed, it is a necessity to the student of geography and history, and to the traveler. It is in frequent demand in the study of current events, that is, of history in the making, and without its aid the newspapers would lack in interest and value.

Perhaps in no other work of reference are the table of contents and the index so essential. The so-called table of contents gives an alphabetic list of all the maps, and the page on which each is to be found.

For any point on the map difficult to find, the index may be consulted. This may appear at the end of the volume or elsewhere. In it the places (mountains, rivers, lakes, counties, cities, etc.) are inserted in alphabetic order in one general list. In some atlases, the names are classified, each class standing separately. Just after each name, the map on which to look is indicated by number or page, and the location on it of the place sought is indicated by a letter and a figure.

Usually maps are divided into blocks by horizontal and vertical lines. The spaces thus formed are

lettered horizontally and numbered vertically, or *vice versa*, so that the location of any particular place can be indicated by naming the horizontal strip and the vertical strip. The block at the intersection of the strips indicates the space within which the place will be found. Thus a letter and a figure are sufficient, as  $B_3$  in the accompanying diagram.

A	B	C	D	
				1
				2
	x			3
				4

Some atlases contain statistics and descriptive matter as well as maps. It is also the practice occasionally to give in the index itself a little special information in condensed form, such as the length of rivers, the area of civil divisions and the population of cities.

Political boundaries, lines of transportation, population and other things dependent on the will of men are subject to change and development; hence the need of assurance that the work which is to be consulted is up-to-date. Some idea of its reliability may be obtained by observing the date of copyright.

### THE GAZETTEER

A gazetteer is a dictionary of geographical names. The names are arranged in alphabetic order, and each is followed by one or more paragraphs of

descriptive text. To guard against being misled by statements regarding matters that are subject to change, the date of copyright should be observed.

#### THE RAILWAY GUIDE

- This is a booklet containing the train schedules of the railroads in a given region. It may bear a different name. These schedules, of course, are subject to frequent change. The practical value of learning to plan a continuous trip by train on any one road, or on two or more connecting roads, will be recognized. The guide should be supplemented by an atlas or a map.

#### LITERATURE

Of works of reference in literature, the most valuable are books of quotations, concordances, anthologies and other collections of literary wholes that have been selected and classified to meet various needs. As illustrations of the numerous class last mentioned, there are Skinner's *Selections for Memorizing*, Baker's *Children's Books of Poetry*, and Bryant's *A New Library of Poetry and Song*. Some are extended into many volumes each. Merit varies widely.

All will agree that no collection can be a satis-

factory substitute for complete works of some of the standard or classic authors quoted, yet the great practical value of many that have been compiled by persons of good literary taste and sound judgment is freely conceded.

#### BOOKS OF QUOTATIONS

A good book of quotations is one of the most useful works of reference, and at least one should be in every library. It is a store of wise, witty, forceful or graceful sentences that have been gleaned and sifted from the writings of centuries. It is of great value to the person who wishes to identify the author of a passage, to complete a quotation, to learn its literary setting, to obtain a text, to reënforce his own composition, to obtain light on a reference or an allusion, or simply to read and enjoy the gems of thought and expression which it contains. The art of using it is easily taught, but facility in consulting it, as with any other work of reference, is acquired only by practice.

To find a particular quotation, the seeker must select as a key or guide at least one of the principal words which it contains, preferably a noun, though a verb or an adjective will sometimes be as good or better. He then turns to the concordance, which is a kind of index, and, if the key word is present,

finds it in its alphabetic place. A distinctive feature of a concordance is that, in addition to indicating the places in the book where quotations containing key words are to be found, it gives enough quotations to show the connection in which key words are used. The alphabetic order is observed even in the arrangement of these brief phrases.

The seeker next glances down the succeeding lines that contain the particular key word he has in mind, observes the phrases in which it occurs, and, if he is successful in his search, is able to identify the very passage he wants and to learn the number of the page on which it occurs. This can be done in less time than is required to tell it.

Suppose a student has need of information concerning a striking sentence about truth being crushed to earth that he recalls indistinctly. Almost any book of general quotations would help him. Suppose he has Hoyt's *Cyclopedia of Practical Quotations*. He may select *truth* as his key word, find it in the concordance, and farther down in its proper alphabetic place among the phrases may discover a line which reads :

*t. crushed to earth shall rise 621 f.*

The key words are often abbreviated as in this instance. The passage he wants is the 6th

(marked *f*) on page 621, and there he is gratified to read :

“Truth, crushed to earth, shall rise again:  
Th’ eternal years of God are hers ;  
But Error, wounded, writhes in pain,  
And dies among his worshippers.”

Not only does he find this, but just beneath he reads, BRYANT — *The Battle Field*. St. 9, which of course means that the author is Bryant, and that the quotation occurs in stanza 9 of the poem *The Battle Field*. If the student should choose *earth* as his key word, the result would be the same.

Suppose, again, a student has occasion to make use of a thought the verbal form of which he recalls imperfectly and which he thinks includes the words, “Some are born great.” The first question is, Which shall be his key word? He passes over *some* and *are* because they do not seem sufficiently distinctive, and takes *born*. He finds it in the concordance and immediately runs his eye down the column of phrases to the letter *s*, where he sees,

*some are born great* \* 287 *f*.

He learns at the bottom of the page that the asterisk (\*) stands for Shakespeare. Now turning to



selection *f* on page 287 he finds the full quotation,

"Some are born great, some achieve greatness,  
and some have greatness thrust upon 'em."

*Twelfth Night. Act II. Sc. 5. l. 157.*

He now knows that the quotation was written by Shakespeare, and that it appears in the play *Twelfth Night*, in Act II, scene 5, beginning at line 157.

An illustrative selection from the concordance (index) in Bartlett's *Familiar Quotations*:

Flood and field, accidents by, 150.  
bridge that arched the, 599.  
leap into the angry, 110.  
of mortal ills prevailing, 770.  
seems motionless as ice, yon, 473.  
shadow lies floating on the, 640.  
taken at the, 115.  
Floods, bathe in fiery, 48.  
passions are likened best to, 25.

Observe that the key word is *flood*, and that the several accompanying phrases are in alphabetic order by their first words, *accidents*, *bridge*, *leap*, etc. In this work, the selections are arranged so that those by the same author are together, not those treating of the same subject.

The selections in some books of quotations are

classified and arranged by subjects, and there are indexes of authors included which show the name of every author represented and the places where his writings appear. With such helps it is easy to find all that any such work contains on a particular subject, or all that it includes of the writings of any particular author.

#### THE CONCORDANCE

A concordance is a kind of index containing a few words from the passage in the text with which each principal word is used. When published as a separate book, it is devoted to a single work or to the works of a single author only, as a concordance of the Bible, a concordance to Shakespeare. In consulting a concordance of the Bible, care should be taken to observe the version or versions on which it is based. Perhaps no ordinary school could use any other concordance to any great advantage. The use of a concordance is sufficiently illustrated in the paragraphs on "Books of Quotations."

#### THE GLOSSARY

A glossary is an alphabetic list of difficult words in a book, to each of which is given an explanation. The special difficulty for which it provides usually

lies in the use of a dialect or of technical terms with which the reader may not be familiar. For illustration, the poems of Burns, some of which are in the Scottish dialect, are ordinarily accompanied by a glossary.

*Examples for practice*

Pink of perfection.  
 Let us have peace.  
 An honest man's the noblest work of God.  
 Our echoes roll.  
 Stone walls do not a prison make.  
 First in war, first in peace.  
 Chip of the old block.  
 Words are things.  
 Vice is a monster of . . . mien.  
 Truth is stranger than fiction.  
 Some books are to be tasted.  
 University a collection of books.  
 Silence eloquent.  
 Eternal sunshine on its head.  
 Sermons in stones.  
 Honor and shame from no condition rise.  
 The child is father of the man.  
 A thing of beauty is a joy.  
 Millions for defense.  
 Hope springs eternal.

Find appropriate quotations on these subjects :  
*gratitude, example, night, immortality, dissension,*  
*character, words, life, cowardice, reputation.*

#### HOW TO TRACE ALLUSIONS

An allusion is "a hint or reference used by way of illustration, suggestion or insinuation" (*Century Dictionary*). For example, it may be said of a man that he has the Midas touch. This would be meaningless to any person who does not know the interesting and suggestive mythologic story of King Midas, who wished that everything he touched might turn into gold.

It has long been the practice to use striking metaphors in this way for the sake of rhetorical effect. Some of them in this condensed form represent pages or volumes. All literature is permeated by them. They are to be explained, not defined. Not to be able to trace their import is to remain ignorant of the meaning of many of the finest passages in the English language. No single work has ever been prepared that contains explanations of more than the minutest fraction of the allusions that exist. They are to be traced back in many directions. Those whose origin is in history must be followed there ; those whose origin is in literature

must be followed there. The arts and sciences have furnished a portion of them.

By far the most useful work to consult in the study of allusions is the large English dictionary. If it does not give the desired information directly, it often gives hints where to look next. The cyclopaedia, the book of quotations, the gazetteer, the biographical dictionary, indexes to works of history and science, and other possible means of discovering the hidden meaning may be consulted to advantage.

It is to be acknowledged that the explanation of some allusions cannot be obtained from books, but must come from the general knowledge and experience of the student.

### *Examples for Practice*

- 1 Kind hearts are more than coronets  
And simple faith than Norman blood.  
*Tennyson.*
- 2 The forest is my loyal friend,  
A Delphic shrine to me. *Emerson.*
- 3 And hast thou sworn on every slight pretence,  
Till perjuries are common as bad pence,  
While thousands, careless of the damning sin,  
Kiss the book's outside who ne'er look within?  
*Cowper.*

- 4 The iron tongue of midnight hath told twelve.

*Shakespeare.*

- 5 What lost a world, and bade a hero fly?

The timid tear in Cleopatra's eye. *Byron.*

- 6 The whirligig of time brings in his revenges.

*Shakespeare.*

- 7 To-morrow is that lamp upon the marsh which  
a traveler never reacheth.

*Tupper.*

- 8 He (Hamilton) smote the rock of the national  
resources, and abundant streams of revenue gushed  
forth.

*Webster.*

#### LITERARY VALUES; DISCRIMINATION IN CHOICE

Choice must be made of books as of associates, for every book partakes of the nature of its author, and reading the one is a form of companionship with the other. As men, authors differ widely in character; they range from righteous to wicked, from wise to foolish, from profound to shallow, from sane to unsound, from mature to callow, from cultured to rude. The printed form is no guaranty of worth. As the poorest and meanest citizen has access to the best books, he may, if he will, commune with the wisest and the noblest. If he can-

not, alone, choose aright, he can easily find a trustworthy adviser.

Not only do authors differ from one another; the same author, in different moods or at different periods of his development, sometimes shows wide variation in character. It follows therefore that the works of many authors are far from uniform in value, success at one time being preceded or followed by failure at another. The wise course is to choose each book on its merits, not to expend time or money on any that has to recommend it only the author's reputation gained in writing another. The selection of complete sets may be evidence of lack of discrimination.

### HISTORY

It is well for every student to obtain at the outset as broad a view as possible of each subject pursued, so that, later, when he takes up the details, he can easily see the interrelations of the parts and more clearly comprehend the whole. Dividing history into sections, classifying these, and treating each loosely in a separate work, all of which has been done for sufficient reasons, has tended, without design, to give the impression that it deals with a mass of unrelated events, any of which may be studied profitably without regard to the others. The truth is that all events are linked together by

the intimate relation of cause and effect, each effect in turn becoming a cause, and that the bond involves not only man but all created things.

For illustration, the revolution of the earth around the sun affects the climate, the climate affects vegetation, vegetation affects animal life; all affect human life and activity. The chains may be traced everywhere. A mountain, a river, a political act, a discovery, an invention, a book, has been an influence that can be traced step by step, in divergent courses, far down the centuries.

There is a unity in history, as in all human knowledge, that is too often overlooked even by those who are mature enough to understand it. The student who comprehends this has an added interest in the subject, and, as he has occasion, supplements his history with material obtained from other sources, especially from biography, which is a kind of history, from geography, and from literature. It is well known, for illustration, that what in some respects is the finest biography of Alexander Hamilton, Atherton's *The Conqueror*, is in the form of fiction, and that the most vivid description of the battle of Waterloo is in Hugo's *Les Misérables*. Poetry and drama are full of references to historic incidents, and present phases of them that the prosaic historian omits.



In no other subject is it so important to know the personal characteristics of the author and the system of philosophy to which he holds; for, even though his narrative of events be not disputed, his explanation of their significance is shaped and colored by his opinions, perhaps distorted by his prejudices. To write impartial history is very difficult; and the nearer the events in point of time or place, the harder is the task. Great struggles, in which violent passions are aroused, as those for reforms or for the maintenance of civil or religious rights, are severe tests of the judgment and fairness of the historian. Though it is of secondary importance, literary ability is a quality that must also be considered. The estimates of competent critics are therefore to be sought.<sup>1</sup>

Histories are usually limited in their scope to particular regions, institutions, or periods. Those not so limited are called general. If properly prepared, the library catalogue will indicate by the class numbers or by the subject cards which of those present in the library to consult regarding any particular topic.

<sup>1</sup> One of the most helpful of such critics is Charles Kendall Adams, formerly professor of history and president of Cornell University, who included, in his *Manual of Historical Literature*, references to all the leading histories in print at the time of publication and likely to be of interest to Americans. 1901.

There are many items of information about each history that are desirable to have and that may not be indicated in the catalogue. Is the treatment concise or exhaustive? Is it popular or profound? Does it contain maps, diagrams and pictorial illustrations? Is the style dry or interesting? Is there a table of contents, and, what is more important, is there a good index? If these qualities or characteristics are not learned from critics in advance, they will at least be observed by the readers.

Good maps are absolutely necessary. If the student would make his understanding of the pages clear and his memory of them lasting, he must locate on the map every geographic feature mentioned in the text. By so doing he fixes a similar map in his mind. The atlas also is to be consulted freely for this purpose. Good illustrations add to the effectiveness of the text.

It is a good plan to preserve lists of the references to important topics as they are looked up from time to time by teachers and students. If each is kept on a card, is headed with the subject and gives the author, the title, the volume number and the page on which each passage begins, it is almost certain to meet the needs of other busy inquirers and to earn their gratitude.

*Subjects for Reference Practice*

(Selected from New York State Syllabus for  
Secondary Schools)

Education in Sparta	Early Britain
Greek games	Normans in England
Persian invasion of Greece	The Magna Charta
Social life in Greece 450 B.C.	The Armada
Socrates	The Puritans
Alexander's conquests	The Long Parliament
The patricians and the ple- beians	The vikings
Roman roads and road making	The crusades
Relations of Rome and Carthage	The invention of the printing press
Hannibal and his cam- paigns in Europe	The Iroquois confed- eracy
The Gauls	The "Reign of Terror"
A Roman residence of the best type in the first cen- tury	The development of the steam engine
The catacombs	Imprisonment for debt
The Goths, Vandals and Huns	Alexander Hamilton's career
	The Northwest in 1804
	"Popular sovereignty"
	Modern philanthropy

After reasonable practice, the looking up of ref-  
erences in history or any other subject should be

a pleasurable task. It develops a sense of confidence and power in self-instruction well worth working for.

## NATURAL SCIENCES AND USEFUL ARTS

In no age of the world have discoveries and inventions followed each other so rapidly as during recent years. Some of these discoveries are unlimited in their possibilities. They very materially modify natural sciences and useful arts, and so effect marked changes in ways of living. Books on these subjects are sometimes out of date almost as soon as they are issued from the press. As with history, so here the question of the reliability of each reference must be considered; and the first inquiry naturally is, How old is it? The answer is to be found not by observing the date of printing, given on the title-page, but by observing the latest date of copyright, notice of which is on the page following. In general, only new books or recent editions of old ones on these subjects are safe to consult. To quote Lord Lytton, "In science, read, by preference, the newest works; in literature, the oldest." Students should be warned against those which contain serious misinformation.

The value of a work on either of these subjects must also depend largely on the fullness and correct-

ness of the author's knowledge, the kind and extent of his experience, and the soundness of his judgment. In the absence of criticism from disinterested and competent reviewers or advisers, some indication regarding the reliability of a work may be had from the reputation of the publisher.

The needs of readers differ widely; and a book which is well adapted to one might be quite useless to another. For example, a highly trained machinist would want a work decidedly technical in character, while an untrained person could make nothing of the strange terms mentioned in it. A book written in popular style would perhaps be welcomed by the latter, but it might be of no use to the former. For some of the trades and professions, special reference works have been published in the form of cyclopedias or dictionaries.

Some of the best high school and college textbooks serve admirably as concise and up-to-date reference books.

Pictorial illustrations and diagrams are helpful, and for reference purposes no book except a dictionary or a cyclopedia is complete without a good index.

### SOCIOLOGY

Within recent years this subject, applying as it does to the relations of men with each other, and

including government, education, commerce, customs, etc., has risen in public estimation to the highest importance. In some of its phases it is closely related to history and to the useful arts; indeed, the student will remember that there is an underlying bond of unity between all subjects of knowledge, and that to obtain a complete understanding of any one he must give some attention to the others. Advances in theory are constant, though gradual, and each is followed by a corresponding change in practice. For example, the theory on which is based the punishment of criminals is plainly undergoing a change and, as a consequence, the present care of them in the prisons stands in strong contrast to that which John Howard observed somewhat more than a hundred years ago; and the changing theory of the responsibility of the state for the education of children and adults has been evidenced since the days of our fathers by increased liberality, by laws making attendance compulsory, by the establishment of free libraries and by numerous other modern practices. How widespread such advances are is known only to the very observing. It follows here, then, as in the natural sciences and the useful arts, that in consulting old books on any branch of this broad subject, the student should place them in proper perspective, — not regard

them as undisputed statements to be accepted at the present time. The knowledge and judgment of the author are especially to be weighed.

One source of material for reference on this and other subjects is the Government. The most of such material, some of it in the form of reports, may be had free on application; for the rest a nominal charge is made. Only an occasional book or pamphlet in this class would be of much use to schools. For publications issued by the United States Government, application should be made to the Superintendent of Documents, Government Printing Office, Washington, D.C.; from him a list of available publications may be had. For those issued by State authority, application should be made to the respective State Departments; for those issued by a municipality, to the mayor or the chamber of commerce. From institutions and business corporations valuable material may sometimes be had. No large library seems complete without a copy of the latest number of the justly popular annual, the *World Almanac*, in which is given a great variety of miscellaneous information of current interest and the latest corresponding statistics.

## **ORGANIZATION AND EQUIPMENT**



The ocean of literature is without limit. How then shall we be able to perform a voyage, even to a moderate distance, if we waste our time in dalliance on the shore? Our only hope is in exertion. Let our only reward be that of industry.

—RINGELBERGIUS.

## LIBRARY ECONOMY

A LIBRARY may be regarded as one great book of reference, each chapter of which is bound separately ; and if it is the duty of those having the care of young people to train them in the use of a single small volume, the duty applies equally to a great volume. The size of the volume does not regulate the force of the obligation. In short, it is the right of every young person to be taught how, without waste of time and effort, to obtain the most out of any collection to which he has, or is likely to have, access. And it is to be borne in mind that libraries are increasing rapidly both in number and in size.

As the school library grows and more nearly reaches its rightful place in the educational system, the need of a trained librarian becomes more urgent. The tendency is to require special preparation for this professional work, and to give to those who are qualified for it increased honor and compensation.<sup>1</sup> The responsibility of the regular teachers does not

<sup>1</sup> In the state of New York the authorities of cities and villages that maintain secondary schools may employ trained librarians and receive annually from the state appropriations of money for this purpose.

diminish on the coming of the librarian; all are simply helped to higher efficiency.

#### CLASSIFICATION

One of the first steps in simplifying any mixed or complicated matter is to classify its parts, putting together those that have similar qualities and showing the connection between the greater and the related lesser. Practice in distinguishing the relations of things is fine exercise in observation and judgment, and, as books treat of almost every conceivable subject, this exercise may be enjoyed by every one who consults a library. The librarian who has the comprehensive knowledge and the skill to arrange thousands of books on a great variety of subjects so that any particular one may be found instantly, is capable of doing a great service and deserves the respect of the public. Every earnest librarian does far more than this.

If the collection is small, the classification should be simple, and books may be arranged on the shelves in groups by subjects, as *history*, *science*, *literature*, *miscellaneous*. But as the number increases and the scope widens, the scheme of classification must be carried further and further into detail to save the time and energies of the student. It is not good public policy to permit the use of the

library to be attended with any more difficulty than is absolutely necessary. A system of records (a catalogue) is necessary to supplement the plan of classification to enable the student to learn easily and definitely both what books are in the library and where to find them.

In making choice of a scheme of classification, where the size and scope of the library require a comprehensive one, it is well to be guided by the judgment of those who have had much training and experience in handling books. The one in most general use is the Decimal System, which, as the name indicates, is based on the idea of dividing and subdividing by 10. This has been most ingeniously worked out, and it is surprising how easily the natural conditions permit it to be done.

Briefly stated, the Decimal System involves these features :

1 The subjects upon which books are written, that is, the subjects of all knowledge, are grouped in nine main classes, each of which is represented by a number in even hundreds, as, *Natural Science*, 500, or *History*, 900. To these is prefixed a tenth class, very general in character and covering the field of all other classes. This includes cyclopedias, general periodicals, etc., is given the title of *General Works* and is designated by the symbol 000.

2 The subjects included in each of the main classes are, in turn, grouped in nine divisions, and each of these is represented by a number consisting of hundreds and tens, the hundreds indicating the main class of which the subject represented by the tens is a division. Thus, *agriculture*, which is one of the useful arts, is represented by the number 630, the number 600 alone representing the entire class of *Useful Arts*, and completing the related group of ten divisions.

3 Each division is still so broad as to require, or admit of, subdivision. The subjects comprising each are therefore, in their turn, grouped in nine subdivisions, each represented by a number consisting of three figures, the units and the tens of which are given a special significance by the preceding figure. Thus, 814 is the symbol for the subdivision *American Essays*, 800 alone always standing for the class *Literature*, and 810 for the division *American Literature*. By this simple means three related classifications are indicated at once, one subordinate to another.

The scheme is carried considerably further to meet the needs of very large libraries, and the full form of it is given in Dewey's *Decimal Classification and Relative Index*. Extensions are made at the right, following a decimal point, as 621.3, *Electric*

*Engineering*, commonly read *six twenty-one point three*, etc. The significance of this quadruple symbol may be shown thus :

600	Useful arts
620	Engineering
621	Mechanical engineering
621.3	Electric engineering

One advantage of the system is that it admits of expansion and contraction to meet varying needs. The use of three significant figures is generally fully sufficient for any but the very largest libraries. Indeed, the use of one figure only, as in the "first summary," would be quite practicable for a very small collection; and two figures (hundreds and tens only, as given in the "second summary") would be sufficient for a collection of considerable size. Additional figures may afterward be entered if occasion should arise. An abridged form of the system has been prepared and is entitled *Abridged Decimal Classification and Relative Index*. The index contains an alphabetic list of thousands of subjects and indicates the proper classification of each.

A full outline of the system adopted should be easily available for reference. The student may expect to find the class number or symbol of each book entered on a label pasted on the back, and

to find the books arranged on the shelves in numerical order by their class numbers, those of each class in alphabetic order by the authors' surnames, and those by each author in alphabetic order by titles. By this plan all the books on any one subject, and all on the same subject by any one author, stand together and are most easily found.

Instead of using gummed labels, which may come off, the common practice is to enter the numbers on the back in white ink, and then to varnish over them with shellac to prevent rubbing.

### THE CATALOGUE

If the first step in making known the resources of a library is to arrange the books in classes according to some orderly plan, the second is to make a record of them that shall enable the inquirer most quickly to obtain any that are wanted. Such a record, called a catalogue, bears a relation to a library which is somewhat similar to that which an index bears to a book. It is indispensable in a large library. There are two forms, the dictionary catalogue and the classed catalogue.

As its name indicates, the dictionary catalogue follows the alphabetic order, and it usually consists of a combination of author list, title list and subject list arranged in one alphabetic series. The classed

catalogue contains a list of the books present, subject by subject, in the order given in the scheme of classification that is in use.

*Selections to Illustrate Dictionary Catalogue in Book Form*

EARTHQUAKES. Milne, John. Earth- quakes, and other earth move- ments.	1898.	551
<i>See also</i> Geology ; Volcanoes.		
Evans, Robley D. A sailor's log.	1901.	923
Faith Gartney's girlhood. Whitney, Mrs A.D.T.		813
Farthest north. Nansen, Fridtjof		919.8
Field, Eugene. A little book of profit- able tales.	1895.	813
Love-songs of childhood.	1894.	811
Fifteen decisive battles of the world. Creasey, Sir E.S.		904
Fifty famous stories retold. Baldwin, James.		904
FIRE PREVENTION. Hill, C.T. Fight- ing a fire	1897.	614.8
Fiske, John. The American revolution	1899.	973.3
The critical period of American his- tory, 1783-1789.	1899.	973.3



The card form is the only one regarded with favor for a library of considerable size. New cards may be inserted in their proper places, or old ones may be removed, without disturbing the orderly continuity of the record, and new entries may be made in type or in script without the necessity of handling a record book; besides, if the collection is large, a set of cards is most convenient for reference.

There are three parts or elements in the fairly full description of a book by one or more of which it may be identified: the author, the title and the subject. Of these, if the inquirer has a particular book in mind, the title is the most important. But many books other than fiction are best known by the names of their authors; and it often occurs that the inquirer remembers the author only, or wants any book written by a favorite author. So the name of the author may be of first importance. Then, there are those real students, young or old, who come for no particular book but want a suitable one on a particular subject. In such cases the subject becomes of first importance.

Librarians find it necessary to distinguish between the title of a book and the subject of which it treats. These are sometimes nearly or quite identical, but as a rule they are not. The subject is a very concise class name, usually consisting of

one or two words, as *Music*, *Biology*, *Domestic Animals*, *Mechanical Drawing*, while the title often is a more extended, perhaps more explicit, statement of the subject, as *Short History of the English People*, *Standards of Public Morality*. It frequently occurs, however, that the title gives little or no hint of the contents, as *Sharp Eyes*, *Sesame and Lilies*.

Even when the complete title of a book gives a clear idea of the subject of which it treats, the title may be so worded that, in a list of titles arranged in alphabetic order by their first words, it is lost as a subject and can be found as a title only when the first word, not counting an initial *a* or *the*, is known. For example, referring to titles just quoted, no one without special information would expect to find an English history by looking for the word *short*, nor to find a work on ethics by looking for the word *standards*. In a large library records of both titles and subjects are needed.

Three cards are usually prepared for every book, the author card, the title card, and the subject card, and each is filed in its proper alphabetic place. The student who understands how to do so can instantly determine from these whether the collection contains what he wants, and if so where to find it on the shelves. The author card gives the name of the author at the top, surname first, and the title

just below ; the title card gives the title at the top and the author just below ; if the subject is written out, it appears at the top of a third card, called the subject card, with the author and the title below. The need of subject cards grows as the books increase in number. With some exceptions, the class number or symbol is written in the upper left-hand corner of every card relating to a particular book. This indicates both the subject class in which the book belongs and its relative place on the shelves.

Books which, like fiction and poetry, treat of no definite subject generally require no subject cards and no class numbers. Individual biography requires no title card, and the subject card contains the name of the person written about, surname first, the name of the author, and the exact title on separate lines in order. The letter B, for *biography*, is usually substituted for the class number. An individual biography treats of the life of one person ; a collective biography of more than one.

It is the custom to group all books of fiction together on the shelves in alphabetic order by authors' surnames, those by each author constituting a small alphabetic group in order by titles.

In all large libraries the books, with some exceptions, are arranged on the shelves in their order by their class numbers. This explains why the attend-

ant who is to get a book from the shelves desires the class number in addition to the author and title, for he treats it as the "call number," and is enabled to find the book without delay.

A complication arises when there are two or more books in the same class, or when two authors of the same name are represented. In such cases each book is distinguished by a special book number under the class number. This is a combination of the author's initial and a corresponding number suggested in Cutter's author table. The "call number" then consists of both the call number and the author or book number. See the title card under "Illustrations," page 131.

#### ANALYTICALS

When a book treats of two or more subjects, or of a series of distinct though related topics, the subjects or topics are listed on the author and title cards. A separate subject card for each item, indicating the book and the page where it may be found, completes this practical record, which is of especial value in a small library. Each extra card of this kind is called an analytical.

#### CROSS REFERENCES

There is often a question as to what form of subject heading shall be adopted. Shall a book on

apples be classed under *apples*, *fruits*, *orchards* or *agriculture*? The specific term is made the subject heading for the particular book, and reference to it is made on each subject card headed by an allied general term. For example, *Apples* may be made the subject head, and on the card headed *Agriculture*, *See also Apples* may be entered. This guide to another subject is called a cross reference.

#### ILLUSTRATIONS

The cards should be 7.5 cm. by 12.5 cm., almost exactly 3 in. by 5 in. Standard cards contain horizontal lines beginning 1 cm. (about  $\frac{3}{8}$  of an inch) from the top, and two vertical lines at the left, one 2 cm. (about  $\frac{3}{4}$  of an inch) and the other 3 cm. from

#### *Author Card*

631	Hopkins, Cyril G. Soil fertility and permanent agriculture. c. 1910.
-----	---

the edge. The author's name always begins at the left vertical line, and the book title begins at the right vertical line.

*Title Card*

631		Soil fertility and permanent agriculture. c. 1910. Hopkins, Cyril G.
-----	--	---

*Subject Card*

631		Agriculture — Soil Hopkins, Cyril G. Soil fertility and permanent agriculture. c. 1910.
-----	--	---

For convenience biography cards are sometimes marked B instead of bearing the class number, 920.

*Biography Subject Card*

B	Hapgood, Norman Abraham Lincoln, the man of the people.	Lincoln, Abraham
---	--	------------------

*Cross Reference Card*

	Twain, Mark, <i>pseud.</i> , Clemens, Samuel Langhorne	see
--	---	-----

Initial subordinate words such as *a*, *an* or *the* are not important in a catalogue.

*Title Card*

973.3 F 54a		(The) American revolution. 2 v. 1899.  Fiske, John
----------------	--	--

This card would therefore stand among the A's, the initial "The" being disregarded. Unless otherwise indicated, the date given if not preceded by a *c.* is always that of printing, not that of the copyright. The full class number 973.3 would not be necessary in a small library, nor would the book number, F 54a, be of value in any but the largest. F is the initial of Fiske, 54 is the number assigned to Fiske in the Cutter table, and *a*, the first letter of "American," is some indication of the particular title. The full "call number" is a combination of these two numbers.



*Author Card with Subject Note*

973-3	Lossing, Benson J.	(The) two spies Nathan Hale John André
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Here are two biographies in one book. Each subject should be entered on a separate card.

*Analytical Subject Card*

973-3	André, John Lossing, Benson J.	see The two spies
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*Analytical Subject Card*

973.3		Hale, Nathan	see
	Los	sing, Benson J.	
		The two spies	

*Examples for Practice*

Does the library contain these books, and if so, where may each be found?

Lew Wallace, *Ben Hur*; Charles Rann Kennedy, *The Servant in the House*; Ralph Waldo Emerson, *Essays*; Longfellow, *Poems*; Percival Chubb, *Teaching of English*; Thomas B. Macaulay, *Essays*; Oliver Goldsmith, *She Stoops to Conquer*; James Russell Lowell, *The Biglow Papers*; Richard D. Blackmore, *Lorna Doone*; John Burroughs, *John James Audubon*.

Name the books in the library, if any, that were written by each of the following :

John Fiske	Walter Scott
Nathaniel Hawthorne	Dallas L. Sharp
John Ruskin	Herbert W. Conn
Charles Dickens	Jacob A. Riis
Louisa M. Alcott	Nathaniel S. Shaler

What books or passages, if any, does the library contain on the following subjects?

History of Greece	Gardening
The weather	Transportation
Raising poultry	Battle of Hastings
The British Parliament	George Washington
Steam engines	Insects
The Constitution of the United States	Hygiene
Trees	The American In- dians

## THE PHYSICAL FORMS OF BOOKS

### SELECTIONS

In selecting books, it is an advantage to know a good book from a poor one. The paper should be of good quality but not glossy, the print large and clear, the binding secure, the corners and edges protected by stiff sides, and the outside design in good taste, not gaudy. The cover on books subject to much use should be held on by something stronger than paper, preferably by tapes or cords. The binding should be

so flexible that the book can be opened widely without straining the back and injuring it permanently.

It is true that most books are printed in one edition only, so that there is no opportunity for choice. But of very many, including standard or classic works on which there is no copyright and the demand for which continues, two or more editions are issued by the same firm or by rival firms. An abridgment may be desirable for some purposes; but the purchaser should know whether he is buying a complete or an abridged work; and if the latter, he should know the extent of the omissions. The presence or absence of annotations or illustrations should be observed, as they may add much to the usefulness of the work.

A poor, cheap book is better than none, provided the content is valuable; but low-priced goods are often expensive in the end, and there is a fine ethical lesson in every possession that exhibits good workmanship and good taste. Incongruity between the physical form of a book and the character and standing of its author should be avoided. Great authors should be represented by substantial, even handsome, editions.

#### MAGAZINES

Some of the best material for reference has appeared in magazines. Without a catalogue of articles

it is difficult, however, to learn the contents of any considerable number of them, or to know where to find articles on any particular subject when needed. Such catalogues are expensive at best, and useless unless there is on hand a stock of the periodicals included in the list. Only a few of the best magazines are very suitable for schools.<sup>1</sup>

### DEFINITIONS

In ordinary usage, a *volume* is either a single work or any part of an extended work that is bound together in one cover. A *pamphlet* is a collection of printed sheets with a paper cover. A *manuscript* is an unprinted book or article, especially an author's copy in handwriting or typewriting.

An *annual* is a book which is published regularly once a year in a new or a revised edition. A *manual* is a small book that may be carried in the hand; an elementary guide to a subject; a handbook.

### <sup>1</sup> PUBLICATIONS RELATING TO PERIODICALS

For characterization of periodicals, see Walter's *Periodicals for the Small Library* (public library).

For a catalogue of articles in the leading periodicals see *The Readers' Guide to Periodical Literature*. It is published monthly, and the third, sixth, ninth, and twelfth numbers contain mention of all articles previously listed in the same year. Small schools or any others that are not pretty well supplied with periodicals would not be warranted in expending so much for a work of this kind, but it can probably be found and consulted in the nearest public library.

A *series* is a succession of books or articles on related subjects, or bearing a common general title and issued in a common form. A *set* is a collection of books that, together, complete a plan or scheme.

An *edition* is (a) the form in which a literary work is published; (b) the whole number of copies printed and published at one time. A *new edition* is either a new form or a new lot. A *revised edition* is one the text of which has been changed. An *annotated edition* is one in which the text is accompanied by notes or comments. An *abridged edition* is one from which a part of the text has been omitted.

Binding is in *paper* when the cover is of flexible paper; in *boards* when it is of stiff cardboard; in *cloth*, *buckram* or *full leather* when the cardboard is covered with cloth, buckram (a kind of coarse, durable cloth) or leather; in *half leather* when the back and corners of the cover are incased in leather.

The size of a leaf, and therefore the measure of a book, is indicated approximately by a term which indicates the fractional part of a large sheet that has been folded to make it, and so, indirectly, the number of leaves into which the sheet has been folded. The greater the number of folds, the more and the smaller the leaves. A sheet folded once makes two leaves, four pages, of the largest size; and a book which, like an atlas, is made of very large leaves is

called a *folio*. This word is from *folium*, meaning *leaf*. A second fold makes four leaves, eight pages, of a size called *quarto*, literally *fourth*. The ordinary large dictionary is a quarto. A third fold makes eight leaves, sixteen pages, of a size called *octavo*, literally *eighth*. A school reader is an octavo. Folding a sheet to make twelve leaves, twenty-four pages, gives a size called *duodecimo*, literally *twelfth*. The sizes thus designated vary somewhat according to the size of the sheet that is used, and the extent to which the leaves are trimmed. There is a tendency to indicate sizes by giving dimensions in inches or centimeters. As recommended by the American Library Association, the respective heights are as follows: octavo, 20 cm. to 25 cm.; quarto, 25 cm. to 30 cm.; folio, 30 cm. to 35 cm.

*List prices* are the full prices advertised in publishers' catalogues or lists. Discounts may sometimes be allowed from them. *Net prices* are the prices below which the books will not be sold, and they do not include the cost of transportation.

*Copyright* is the exclusive right to publish and sell a book for 28 years and may be obtained from the United States government by the author. Two copies, accompanied by an application and a fee of one dollar, must be deposited with the Librarian of Congress, Washington, D.C. A renewal of copy-

right may be obtained for a further period of 28 years if the conditions are favorable.

As a means of protecting the interests of author and publisher, a notice of copyright, giving the date, is printed in the book, customarily on the page following the title-page. This is an important item to observe, for it is a means of learning the real age of the book. It is an indication when it was written, or when the latest change in the text, if any, was made. The date at the bottom of the title-page merely shows when that particular copy was printed.

#### COMMON ABBREVIATIONS

<i>O.</i> . . . . .	octavo	<i>ed.</i> . . .	editor, edition
<i>Q.</i> . . . . .	quarto	<i>comp.</i> . . .	compiler
<i>F.</i> . . . . .	folio	<i>o.p.</i> . . .	out of print
<i>v.</i> . . . . .	volume(s)	<i>pseud.</i> . . .	pseudonym
<i>p.</i> . . . . .	page	<i>anon.</i> . . .	anonymous
<i>pp.</i> . . . . .	pages	<i>n.</i> . . . . .	net
<i>bds.</i> . . . . .	boards	<i>cm.</i> . . . .	centimeter(s)
<i>cl.</i> . . . . .	cloth	<i>c.</i> . . . . .	copyrighted

#### THE CARE OF BOOKS

There is a code of manners with books as with knives and forks, the handkerchief or other articles of daily use, and it is assumed that no person will



knowingly violate it. Here are a few simple rules embodied in that code :

1. To open a new book the first time, place it on the table with the back edge down ; then open a few leaves on one side and press them down ; follow in the same way with a few on the other side, and so alternate from side to side till the middle has been reached. If a book be opened so wide as to break the back, it will never open easily except in one place, and the injury is permanent.

2. Keep the books clean and sanitary. They are made unsightly and repulsive by holding them with dirty hands or by rubbing the leaves with moistened thumb to turn them. The soiled page is a telltale.

3. For a bookmark use something as thin as paper. Turning down leaves, marking them with pencil or pen or using any thick object for a bookmark effects an injury that cannot be repaired. Such acts show a lack of appreciation of works of art such as characterized the Vandals hundreds of years ago.

4. Preserve the good forms of the books. Piling them upon each other, standing them on their front edges, or allowing them to lean to the right or the left on the shelves strains the backs and destroys the regular forms.

5. Stand them together rather loosely on the shelves, otherwise in removing them the sides after

a short time may become marred by rubbing, or the backs may become torn from pulling them out of a tightly packed mass.

## ACCESSIONS

### ACCUMULATING A LIBRARY

There is moral strength in the mere ownership of good books. A private collection made by the owner is an indication of his tastes, his mental caliber and his moral character. "A man is known by the company he keeps;" and selecting books is like choosing friends. It is not always possible to choose one's associates, but it is possible to select books one will read. If rightly selected, a good book that is well bound and tastily illustrated is a constant source of pride and satisfaction. It is like a well-dressed, well-bred person whose society one delights in and whose ways one likes to imitate.

Young people should early begin to make collections of their own. In this they will need the guidance of older persons. They may even need protection from those generous but indiscriminating friends who make holiday or birthday gifts of books that have nothing to recommend them but their cheapness. The vicious, the vulgar and the inane would be dear at any price; and those of the best quality are not necessarily expensive.

Whether the ability to read shall be a means to uplift or to degrade depends on the taste and habits of each individual; and responsibility for the turn it shall take rests heavily on teachers and parents. For a teacher to be conscientious and faithful is much, but it is not enough; judgment and skill must be added. Understanding and interest will add considerably more. The successful teacher faces the pupils toward inexhaustible sources of pleasure that is pure, and sets up a wall of protection against evil influences. The outlook must never be permitted to grow hopeless through lack of suitable private collections; school and public libraries must supply all deficiencies.

No library, public or private, is ever really complete and perfect; but, even if it were possible to make it so, it could not, without accessions, remain so long; for the readers are constantly changing in personnel, or are growing more mature, or are changing their points of view, and newly published books are constantly supplanting old ones. Additions must therefore be made from time to time to keep it up to date and to meet new and varying conditions. A good book is not necessarily good for everybody; indeed, only a small proportion of any general collection is well adapted to any individual at any particular time, and a bright boy or girl can exhaust

the resources of a small collection to meet his or her personal need at any one period. A considerable variety is desirable in a school library. Fresh material always renews interest in the collection.

There are, then, duties toward the library as well as duties toward the pupils. The school librarian and the teacher, if not one and the same person, are often, to their credit, active in securing accessions to the equipment without waiting for suggestions or directions from the supervisory officer or any other person.

### SELECTION

So largely does the success of the librarian and the teacher depend on the suitability of the selections, and so vitally does the character of the books that are bought affect the welfare of the school that advice on the far from simple task of selecting and buying seems wise. The judgment of competent, disinterested advisers should be sought when necessary. Some of the published lists are exceedingly helpful.<sup>1</sup>

<sup>1</sup> Paragraphs relating to this subject have been inserted in the previous pages to meet specific needs as follows :

Literary values; Discrimination in choice; Selecting reference works (in general); Selecting cyclopedias; Selecting works of history; Selecting works of science; Selecting sociological works; Physical forms of books.

In content and literary form, the books should be of positive value and excellence. Most books are mediocre, and many contain passages or set forth ideals that would be harmful. . Rated in the order of importance are subject matter, literary form, physical form and price.

The books should be adapted to the needs and tastes of their prospective readers. The immature and the uncultivated readers are to be provided for with the others. This can be done without imposing on them dry or profound works that are suitable only for scholarly adults, and, on the other hand, without offering any that are mere froth without substance. In school collections, the needs of every grade, from the lowest to the highest, should be provided for.

The value of good fiction is not to be underestimated; yet the teacher who has succeeded only in inducing the novel-reading habit has failed to present in an attractive light a highly important part of the library. The reading of fiction can perhaps be kept within reasonable bounds by offering interesting true stories and poems, of which there are far more to be had than would be supposed. No child objects to a story because it is true. He wants it interesting, and in that he is not singular. Biography, history, science and travels furnish interest-

ing material without end. A reasonable proportion should be observed in selecting books and in reading.

It is just as unwise to select books by considering their titles only as to choose friends by considering their names only. A title or a name is one thing; character is another. The one is no sure indication of the other.

It is generally unwise to take full sets or series; it is much like taking everything named on a bill of fare. *Discriminate* is a good watchword for the librarian and the teacher.

The idea of uniformity can easily be carried to such an extreme in art as to become tiresome and repugnant. Uniform bindings and sizes present a pleasing picture to the eye, taking a set as a whole; but children are generally reluctant to choose any unit that lacks distinctiveness, or to cause a break in a complete or beautiful set by withdrawing a book. At any rate, uniformity in binding and size has not been a winning quality in a school library where children have access to the shelves.

It is generally unwise, except in the case of cyclopedias and some other works, to order books that are sold by subscription. None of them are indispensable, and, if still wanted, they can be had later at greatly reduced prices.

Thin paper editions have some advantages for the private library, but they cannot withstand the usage they are certain to receive in a collection intended for general service.

### *Bibliographies*

A bibliography is a list of books relating to a particular subject or author, or classified and recommended for a particular purpose. It differs somewhat from a catalogue, which is a list of books that have been accumulated for reading or that are offered for sale. A bibliography is of value or interest chiefly to the student who is pursuing a particular subject or to the person who desires guidance in making selections for a particular purpose; a catalogue is of value chiefly to show where copies may be consulted or where and on what terms they may be bought. This distinction does not always prevail. Both may be needed by the librarian and the teacher. Bibliographies are issued by the national and the state departments of education, by some public libraries, by various associations and by individual scholars and specialists. The state department of education or the nearest public library will, on request, advise which would be most helpful in a given case and how to obtain them. A small charge is sometimes made for those pub-

lished by other than government officials. It should be borne in mind that many of these bibliographies are intended to suggest books suited to adults, and that they may include the titles of some that would be valueless or even harmful to young people. The purpose of each bibliography that is used should be noted.

The catalogues issued by many publishers contain descriptive notes, and some contain classified lists. The publishers are always glad to send copies on request.

### *Lists for Observation*

A. L. A. catalogue.

Part 1. Classed catalogue.

Part 2. Dictionary catalogue.

New York State Education Department lists for elementary and secondary schools. Free.

U. S. Bureau of Education, Washington, D.C.

List of publications of the Bureau available for free distribution. Free.

U. S. Department of Agriculture, Washington, D.C.

Free publications of the Department classified for the use of the teacher. Free.

### *Purchase*

Purchases of any considerable amount can generally be made to best advantage from regular book



dealers or jobbers, and liberal discounts from list prices can be obtained, though purchases can be made directly from the separate publishers. Buying in one lot effects a saving in transportation charges and postage.

In ordering books it is desirable to give the author, the title, the publisher and the particular edition and binding if there are more than one. The exact title is absolutely necessary; the other items are a convenience to the dealer. If shipment should be made by express, the express office as well as the post office should be given. Prices may be obtained in advance. Payment may be made by postal money order or by draft.

The purchase of more than one expensive work treating of the same subject is seldom necessary or desirable.

# **COURSE OF INSTRUCTION**

As the pupil advances in the acquisition of knowledge, he should be given more definite instruction as to the manner in which he may systematize his reading so as to lead to the best possible results. More than this, he should on occasion be held to as strict account in the matter of his reading as in that of any other part of his school work ; and he should be brought so constantly into contact with books that he will unconsciously acquire a ready skill in using them for purposes of reference.

—JAMES BALDWIN.

## LESSONS FOR ELEMENTARY SCHOOLS

ALL through the public school courses, English stands first in importance. It is the key to success in every other subject. To read, to read good books, to form the habit of reading good books, is the progressive policy pursued in every good elementary school. No other work done in the school can give promise of such great and lasting benefit.

In due time, practice in looking up easy references should be given, as occasions arise, always in a systematic way. This preparation for severer study in the secondary school will prove most helpful.

This outline should be modified or extended as necessary. The lessons should be simple.

### OUTLINE FOR ELEMENTARY SCHOOLS

#### *The care of books (Grades 1-4)*

How to open a new book

How to hold a book and turn the leaves

Cleanliness

Preservation

*The dictionary (Grades 5-8)***Finding words****Alphabetic arrangement****Thumb index ; top guide words****Spelling****Capitals ; hyphens****Pronunciation****Division into syllables****Accent****Diacritical marks****Definitions****Selection from a series****Abbreviations that frequently appear in body of work****Special sections****Gazetteer (geographical dictionary)****Biographical dictionary***The atlas (Grades 7-8)***How to use table of contents and index***The cyclopedia (Grades 7-8)***How to find subject matter***Special aids (Grades 7-8)***The table of contents****The index****Book of quotations**

*The library catalogue (Grades 7-8)*

## How to find entries of author and title

These lessons are intended to supplement the study of other subjects in such a way as to make it easier, more enjoyable and more profitable, — not to add a new subject to an already full curriculum. They can easily be condensed so as to serve the needs of any small school.

## LESSONS FOR SECONDARY SCHOOLS

It is advised that in presenting these lessons, two opposite tendencies be avoided: that of the stickler for mere form, who conscientiously follows out a course to the utmost detail exactly as outlined, regardless of the needs of the class and of knowledge that the students already have, and that of the capricious person, who changes his direction so frequently as to prevent his arriving anywhere. There must be order in the instruction, but that which is best for one individual or one class may not be the best for another. This course should therefore be modified to meet local conditions more perfectly if there is occasion to do so. The lessons on library economy ought to be given to each class soon after its entrance to the secondary school if it has access to a library worthy of the name.

Although this outline may appear somewhat formidable, it should be observed that some of the work has already been done, or ought to have been done, in the elementary school, and that some of the remainder may be disposed of very satisfactorily by the briefest mention.

Instruction in the use of the library and of reference books which is not accompanied by abundant illustrations and continual practice on the part of the students is certain to be a failure. This is a very practical subject, and it should be treated accordingly.

#### OUTLINE FOR SECONDARY SCHOOLS

(Review of elementary course as found desirable)

##### *The care of books*

How to open a new book

Cleanliness

Preservation

##### *Special aids in finding references*

The table of contents

The index

##### *The English dictionary*

Finding words

Alphabetic arrangement

Thumb index ; top guide words

**Spelling**

Capitals ; hyphens

**Pronunciation**

Division into syllables

Accent

Diacritical marks or special phonic signs

**Definitions**

Study of primitives before derivatives

Classed according to parts of speech

Discrimination between uses of same forms in different grammatical relations, especially in adjective, noun and verb series, and in transitive and intransitive verb series

Selection from a series

Abbreviations that frequently appear in body of work

**Etymology of words (origin and development)**

Significance of parts, as stems, prefixes and suffixes

**Synonyms**

Discrimination in use

**Antonyms****Special sections**

Gazetteer (geographical dictionary)

Special signs and abbreviations

Biographical dictionary

Arbitrary signs

Additional dictionary signs



Illustrations (pictorial)

Brief history of the English language

Guide to pronunciation

*The cyclopedia*

How to find subject matter

Selection of subject word

Common ; technical

General ; specific

Classed as :

Elementary

Concise

Scholarly

Exhaustive

*Reference works in geography*

The atlas

How to use table of contents and index

The gazetteer

*Reference works in literature*

Forms

Book of quotations ; concordance ; anthology

How to find quotations

How to trace allusions

Literary values

Discrimination in choice

*Reference works in history*

Relation of history to geography, biography, literature, etc.

Supplemental information to be found in all

Author

Personal characteristics and mental attitude

Critical estimate of works

Character and scope of treatment

General or special

Text

Concise or extended

Popular or scientific

General outline

Table of contents

Value and use of :

Maps

Geographical ; historical

Diagrams

Illustrations (pictorial)

Historical scenes ; historical objects ; portraits

Index

*Reference works in natural sciences and useful arts*

Importance of consulting recent works. Regard for date of copyright and for author's knowledge and experience

**Treatment**

Popular ; technical

**Illustrations**

Special value of pictures and diagrams

Ability to understand or interpret drawings

Special works of reference devoted to each subject

*Reference works in sociology*

Relation of sociology to history and the useful arts

Importance of:

Consulting recent works where present conditions  
and practices are concerned

Weighing knowledge and judgment of author

Government publications

**SOME GENERAL IDEAS OF LIBRARY ECONOMY**

(To be presented early in the secondary school  
course)

*The decimal system of classification*

The primary classes and their symbols

The divisions and their symbols

The subdivisions and their symbols

The general outline, items of 3 figures only

*Catalogue*

Card catalogue

Author card ; title card ; subject card

Class number

Author number (book number)

Analyticals

Cross references

### *Arrangement*

Alphabetic arrangement of cards

By authors, titles and subjects

Numerical arrangement of shelf list cards

By class numbers

Arrangement of books on shelves

1 In numerical order by class numbers

2 In alphabetic order in each class

a By authors' names

b By titles, grouped by authors

3 Grouping together:

Fiction in alphabetic order by authors

Biography in alphabetic order by subjects  
written about

### *Practice*

Practice in learning :

Whether the library contains a particular book,  
and if so, where to find it

What books, if any, the library contains on a given  
subject

What books by a particular author, if any, are in  
the library

*Miscellaneous topics*

The physical forms of books

Distinction between the terms in each of the following groups :

<i>a</i> Book	<i>e</i> Binding
Volume	Paper
Pamphlet	Boards
Periodical	Cloth
Manuscript	Buckram
<i>b</i> An annual	Half leather
A manual	Full leather
<i>c</i> Series	<i>f</i> Sizes
Sets	Folio
<i>d</i> Editions	Quarto
New	Octavo
Revised	<i>g</i> Prices
Annotated	List
Abridged	Net

Common library abbreviations

Bibliographies

Copyrights

How obtained ; effect ; term ; notices in books

Distinctive characteristics of leading periodicals

Advantages in accumulating a choice private collection of books

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